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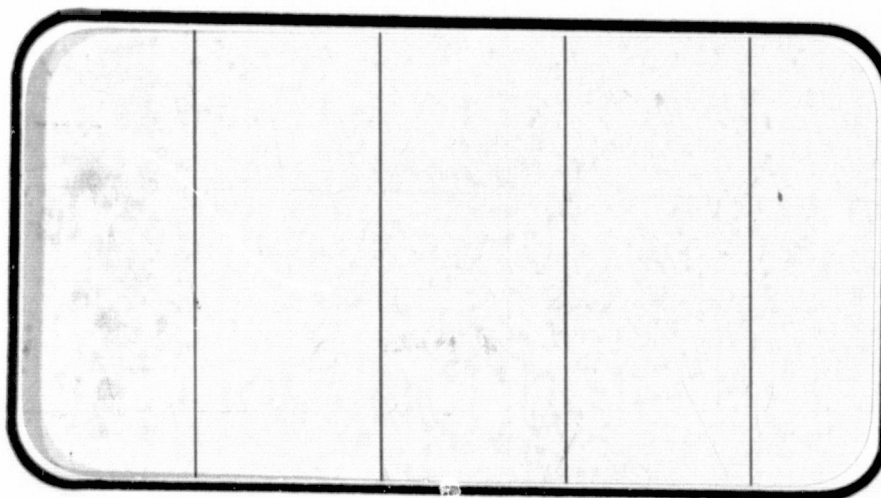
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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NASA CR-

141826



(NASA-CR-141826) RESULTS OF AN
INVESTIGATION OF THE 0.003-SCALE SPACE
SHUTTLE EXTERNAL TANK MSFC MODEL 460 IN
NASA/MSFC 14 X 14-INCH TRISONIC WIND TUNNEL
TO DETERMINE STATIC PRESSURE DISTRIBUTIONS

N76-16135

HC \$18.75

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G3/18 08467

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT



JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANAGEMENT services

SPACE DIVISION



CHRYSLER
CORPORATION

November, 1975

DMS-DR-2165
NASA CR-141,826

VOLUME 4 OF 5

RESULTS OF AN INVESTIGATION OF THE 0.003-SCALE
SPACE SHUTTLE EXTERNAL TANK MSFC MODEL 460
IN THE NASA/MSFC 14 X 14-INCH TRISONIC WIND TUNNEL
TO DETERMINE STATIC PRESSURE DISTRIBUTIONS DURING
REENTRY (TA2F)

by

P. E. Ramsey, MSFC
G. W. Winkler, NSI

Prepared under NASA Contract Number NAS9-13247

by

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Chrysler Corporation Space Division
New Orleans, La. 70189

for

Engineering Analysis Division
Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number: MSFC TWT 596
NASA Series Number: TA2F
Model Number: 460
Test Dates: July 20-23, 1974
Occupancy Hours: 104

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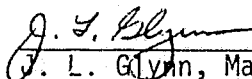
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DATA MANAGEMENT SERVICES:

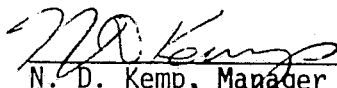
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RESULTS OF AN INVESTIGATION OF AN 0.003-SCALE
SPACE SHUTTLE EXTERNAL TANK MSFC MODEL 460 IN THE
NASA/MSFC 14 x 14-INCH TRISONIC WIND TUNNEL TO
DETERMINE STATIC PRESSURE DISTRIBUTIONS DURING REENTRY
(TA2F)

by

P. E. Ramsey, MSFC, and G. W. Winkler, NSI

ABSTRACT

Objective of the test was to obtain static pressure distributions for the ET at reentry conditions. Basic configuration of the model was the MCR 0200 ET modified to include a rectangular crossbar at the aft ET/orbiter attach point. Mach numbers were 1.96, 3.48, and 4.96. Reynolds number per foot at these Mach numbers were 6.95 million, 6.42 million, and 4.95 million, respectively. Angle of attack range was -8 to 100 degrees and roll angle was 0 to 315 degrees. Occupancy hours were 104.

TABLE OF CONTENTS

	Page
ABSTRACT	iii
INDEX OF MODEL FIGURES	3
INDEX OF DATA FIGURES	4
NOMENCLATURE	6
INTRODUCTION	10
MODEL DESCRIPTION	11
CONFIGURATIONS INVESTIGATED	13
TEST FACILITY DESCRIPTION	14
TEST PROCEDURE	16
DATA REDUCTION	17
REFERENCES	19
TABLES	
I. TEST CONDITIONS	20
II. DATA SET/RUN NUMBER COLLATION SUMMARY	21
III. MODEL DIMENSIONAL DATA	29
IV. TABULATED DATA PRINT-OUT FORMAT AND COLLATION BETWEEN TUBE NUMBER, ORIFICE NUMBER, AND ORIFICE LOCATION ON MODEL--SIDE-MOUNTED ET	41
V. TABULATED DATA PRINT-OUT FORMAT AND COLLATION BETWEEN TUBE NUMBER, ORIFICE NUMBER, AND ORIFICE LOCATION ON MODEL--TAIL MOUNTED ET	43
VI 0.003-SCALE 324-INCH ET REFERENCE DIMENSIONS	45
FIGURES	
MODEL	46

TABLE OF CONTENTS (Concluded)

	Page
DATA	51
VOLUME 1--Pages 1-720	
VOLUME 2--Pages 721-1200	
VOLUME 3--Pages 1201-2000	
VOLUME 4--Pages 2001-2740	
APPENDIX	
TABULATED SOURCE DATA	51
VOLUME 5	

INDEX OF MODEL FIGURES

<u>Figure</u>	<u>Title</u>	<u>Page</u>
1.	Missile Axis Systems	46
2.	Model Sketches	
	a. General Arrangement of MSFC Model 460, Configuration T ₁ External Tank with Protuberances	47
	b. External Tank Model Pressure Orifice Locations	48
3.	Model Photographs	
	a. External Tank Model No. 460, Configuration T ₁ Tail-Mounted with Protuberances	49
	b. External Tank Model No. 460, Configuration T ₂ Side-Mounted without Protuberances	50

INDEX OF DATA FIGURES

FIGURE NUMBER	TITLE	CONDITIONS VARYING	PLOTTED COEFFICIENTS SCHEDULE	PAGES
<u>VOLUMES 1 AND 2</u>				
4	PRESSURE DISTRIBUTION OVER ET - T1 MODEL WITH PROTUBERANCES	PHI, ALPHA, THETA, MACH	A	1-1200
<u>VOLUME 3</u>				
5	CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES	PHI, ALPHA, X/LB, MACH	B	1201-2000
<u>VOLUME 4</u>				
6	LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES	PHI, ALPHA, MACH	C	2001-2040
7	LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES	PHI, ALPHA, MACH	D	2041-2080
8	PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES	ALPHA, THETA, MACH	A	2081-2440
9	CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES	ALPHA, X/LB, MACH	B	2441-2680
10	LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES	ALPHA, MACH	C	2681-2692
11	LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES	ALPHA	D	2693-2704
12	STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)	PHI, MACH CONFIGURATION	E	2705-2740

INDEX OF DATA FIGURES (Concluded)

SCHEDULE OF COEFFICIENTS PLOTTED:

- A) CP vs. X/LB
- B) CP vs. THETA
- C) $DCNM/D(X/LB)$ vs. X/LB
- D) $DCYM/D(X/LB)$ vs. X/LB
- E) CNM vs. ALPHA
 - CLMM
 - CYM
 - CYNM

NOMENCLATURE

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>	<u>Units</u>
a		speed of sound	m/sec, ft/sec
A _b		base area; cross-sectional area of the cylindrical ET	in. ²
b _{ref}	BREF	reference span; diameter of the cylindrical section of the model	in.
ET		external tank	
F _A		axial force (AF), positive in the negative direction of x _m	lb
F _N		normal force (NF), positive in the negative direction of z _m	lb
F _y		side force (SF), positive in the positive direction of y _m	lb
l _B	LBODY	length of the ET	in.
l _{ref}	LREF	reference length; diameter of the cylindrical section of the model	in.
M	MACH	Mach number; V/a	
MRP	MRP	moment reference point located in the x _m , y _m , z _m axes by XMRP, YMRP, and ZMRP (See Data Reduction section)	
M _x		rolling moment (RM); a moment about the x _m axis (a positive rolling moment tends to rotate the positive y _m axis toward the positive z _m axis)	in.-lb
M _y		pitching moment (PM); a moment about the y _m axis (a positive pitching moment tends to rotate the positive z _m axis toward the positive x _m axis)	in.-lb
c g		center of gravity	

NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>	<u>Units</u>
M_z		yawing moment (YM); a moment about the z_m axis (a positive yawing moment tends to rotate the positive x_m axis toward the positive y_m axis)	in.-lb
p_∞	P	pressure, freestream	psi
p_o	P0	stagnation pressure	psi
q_∞	Q(PSI)	free stream dynamic pressure	psi
S_{ref}	SREF	reference area; cross-sectional area of the cylindrical section of the model	in. ²
RN/L	RN/L	unit Reynolds number	per m, per ft
SRB		solid rocket booster	
V		velocity	m/sec, ft/sec
x_m, y_m, z_m		missile axis system (see Data Reduction section)	
X		distance from nose of ET model in the negative x_m direction	in.
x_T, y_T, z_T		model stations; (see figure 2a)	in.
x_{CP}/ℓ_B	XCP/L	longitudinal position of the center of pressure, expressed as a fraction of the ET length, measured from the ET nose	
$\frac{x_{CP}}{\ell_B} = \frac{x_{MRP}}{\ell_B} - \frac{C_{m_m}}{C_{N_m}} \frac{\ell_{ref}}{\ell_B}$			
\bar{c}		aerodynamic chord	m, ft
COEFFICIENTS			
C_{A_m}	CA	axial force coefficient; $F_A/q S_{ref}$	

NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>	<u>Units</u>
$C_{A_{b_m}}$	CAB	base axial force coefficient; $(p_\infty - p_b) A_B / q S_{ref}$	
C_{A_f}	CAF	forebody axial force coefficient; $C_{A_m} - C_{A_{b_m}}$	
C_{ℓ_m}	CBL	rolling moment coefficient; $M_x / q S_{ref} b_{ref}$	
C_{m_m}	CLMM	pitching moment coefficient; $M_y / q S_{ref} \ell_{ref}$	
C_{N_m}	CNM	normal force coefficient; $F_N / q S_{ref}$	
C_{n_m}	CYNM	yawing moment coefficient; $M_z / q S_{ref} b_{ref}$	
C_p	CP	pressure coefficient; $(p - p_\infty) / q$	
C_{Y_m}	CYM	side force coefficient; $F_y / q S_{ref}$	
$C_{N'_m}$	DCN/DX	local normal force coefficient; $\partial C_N / \partial (X/D)$	
$C_{Y'_m}$	DCY/DX	local side force coefficient; $\partial C_Y / \partial (X/D)$	
SYMBOLS			
α	ALPHA	angle of attack	deg.
β	BETA	angle of sideslip	deg.
ϕ	PHI	angle of roll	deg.
ψ	PSI	angle of yaw	deg.

NOMENCLATURE (Concluded)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>	<u>Units</u>
θ	THETA	circumferential location	deg.
ρ		mass density	kg/m ³ , slugs/ft ³
ref		reference conditions	
∞		free stream conditions	
b		base	
c		cavity	
t		total conditions	
B		model body	
T		external tank	
m		missile axis system	
l		local	
s		static conditions	
	MOUNT	1.0 indicates tail mounted (T_1) 2.0 indicates side mounted (T_2)	

INTRODUCTION

After the solid rocket boosters and the external tank separate from the orbiter, the ET will reenter the earth's atmosphere at high supersonic or even hypersonic Mach numbers. This test is the second of two tests conducted in the NASA-MSFC 14-inch Trisonic Wind Tunnel to obtain force and pressure data on the 324-inch diameter ET at typical reentry angles of attack.

Model (MSFC No. 460) configuration is a 0.003-scale representation of the ET with fuel lines and forward and aft SRB and orbiter attach hardware. Also included is the ET/orbiter rectangular crossbar attach structure.

Pressure taps (192 total) were used to obtain data for evaluating the load distribution on the ET. Further evaluation of the ET aerodynamic characteristics can be made by comparing data from this test with data from TWT 583 (reference 4).

Pressure data were taken at three Mach numbers: 1.96, 3.48, and 4.96. Angle of attack range was -8 to 100 degrees, which was obtained by using two ET model mountings. Range -8 to 30 degrees used a tail-mounted model (T_1) for each of eight roll positions, 0 to 315 degrees. This model had attach structure and protuberances. For the range of 51 to 100 degrees, a side-mounted model (T_2) at 0° roll position was used.

MODEL DESCRIPTION

The model is a 0.003-scale of the MCR 0200 space shuttle ET configuration modified to include a crossbar at the aft orbiter/ET attach points. General arrangement of the model is shown in figure 2a. The model is designated MSFC #460, and it consists of two ET models (one tail-mounted and one side-mounted); protuberances simulating fuel lines, attachment hardware, etc.; and model adapters which allowed the tanks to be supported in the tunnel on RI stings #1 and #3. The models were built by NASA to conform to the configuration specified by Rockwell International drawing VL78-000041B (Reference Drawing 6) and Martin-Marietta memo SA-A-74-9 (Reference Report 2).

Both ET models were made of stainless steel and contained 192 pressure orifices each. From these orifices, stainless steel and annealed 0.032-inch OD tubing was routed out the base (or the side) of the model. Four feet of 0.050-inch OD tubing was brazed onto each of the 0.032-inch tubes as close to the exit cavity as possible.

When placed in the tunnel test section, the tubing bundle from the model was secured along the sting and routed down the sector through the tunnel floor. At this point, Tygon tubing was used to connect the steel tubing to quick disconnects, which were connected to the scanivalves. Installation photographs for the tail mounted (T_1) and side mounted (T_2) models are in figures 3a and 3b, respectively.

Model stations are sometimes used to describe locations of various components of the model. When used, these stations will be given in

MODEL DESCRIPTION (Concluded)

inches model scale and the zero reference points will be same as in Rockwell International drawing VL72-000088"D" (Reference Drawing 2). Zero reference points are shown in figure 2a.

CONFIGURATIONS INVESTIGATED

Two ET configurations investigated are defined as follows:

T₁--MCR 0200 tail-mounted, modified to include crossbar configuration with protuberances.

T₂--MCR 0200 side-mounted, "clean" configuration (without protuberances).

Each of the configurations consists of the following model components:

T₁--T₁₂ AT₅ AT₆ AT₇ AT₈ AT₉ PT₁ PT₂ PT₃ FL₁ FL₂ FR₆

T₂--T₁₂

Brief descriptions of each component are below. Refer to table III for dimensional data.

T ₁₂	Baseline 324-inch diameter external oxygen-hydrogen tank
AT ₅	Forward orbiter/ET attach structure
AT ₆	Left rear orbiter/ET attach structure
AT ₇	Right rear orbiter/ET attach structure
AT ₈	Forward SRB/ET attach structure
AT ₉	Aft SRB/ET attach structure
PT ₁	LOX vent line fairing
PT ₂	LOX feed line
PT ₃	LH ₂ feed line
FL ₁	LOX feed line
FL ₂	LH ₂ feed line
FR ₆	Aft ET/orbiter crossbar

TEST FACILITY DESCRIPTION

The Marshall Space Flight Center 14" x 14" Trisonic Wind Tunnel is an intermittent blowdown tunnel which operates by high pressure air flowing from storage to either vacuum or atmospheric conditions. A Mach number range from .2 to 5.85 is covered by utilizing two interchangeable test sections. The transonic section permits testing at Mach 0.20 through 2.50, and the supersonic section permits testing at Mach 2.74 through 5.85. Mach numbers between .2 and .9 are obtained by using a controllable diffuser. The range from .95 to 1.3 is achieved through the use of plenum suction and perforated walls. Mach numbers of 1.44, 1.93 and 2.50 are produced by interchangeable sets of fixed contour nozzle blocks. Above Mach 2.50 a set of fixed contour nozzle blocks is tilted and translated automatically to produce any desired Mach number in .25 increments.

Air is supplied to a 6000 cubic foot storage tank at approximately -40°F dew point and 500 psi. The compressor is a three-stage reciprocating unit driven by a 1500 hp motor.

The tunnel flow is established and controlled with a servo actuated gate valve. The controlled air flows through the valve diffuser into the stilling chamber and heat exchanger where the air temperature can be controlled from ambient to approximately 180°F. The air then passes through the test section which contains the nozzle blocks and test region.

Downstream of the test section is a hydraulically controlled pitch sector that provides a total angle of attack range of 20° ($\pm 10^\circ$). Sting offsets are available for obtaining various maximum angles of attack up to 95°.

TEST FACILITY DESCRIPTION (Concluded)

The diffuser section has movable floor and ceiling panels which are the primary means of controlling the subsonic Mach numbers and permit more efficient running supersonically. The sector assembly and supersonic diffuser telescope into the subsonic diffuser to allow easy access to the model and test section.

Tunnel flow is exhausted through an acoustically damped tower to atmosphere or into the vacuum field of 42,000 cubic feet. The vacuum tanks are evacuated by vacuum pumps driven by a motor of 500 hp.

Data are recorded by a solid-state digital data acquisition system. The digital data are transferred to punched cards during the run to be reduced later by a computer to proper coefficient form.

TEST PROCEDURE

First part of the test was conducted using a side-mounted, "clean" configuration (T_2 without protuberances). Since it was a "clean" configuration, the roll angle was considered to always be 0 degrees. Angle of attack range was from 51 to 100 degrees in increments of 3 degrees. Data were obtained at Mach numbers of 1.96, 3.48, and 4.96.

Second part of the test consisted of using a tail-mounted model with attach hardware, fuel lines, and electrical tunnel. Angle of attack range was from -8 to 30 degrees in increments of 4 degrees. Data were obtained at eight roll positions, 0 to 315 degrees in 45-degree increments. All orifices and tubing were checked for leakage at the beginning of the test and after each roll position change. A leak check after rolling the model insured that correct measurements were being received from the orifices. Response time for the scanivalve function was within the one-second intervals allowed each scanivalve.

List of average test conditions is in table I. Dataset run number collation summary is in table II.

DATA REDUCTION

Location of each pressure orifice and the numbering system are presented in tables IV and V. Also special identification of blocked or inoperative pressure orifices is made for both tail-mounted and side-mounted models in these tables. Locations of these orifices are shown in figure 2b.

Sting deflections were measured outside the tunnel by using check weights. Sting deflections versus load curve for the pressure test (TWT 596) was found to be the same, within allowable accuracy, as that of the force test (TWT 583). The same ET configuration and only slightly different support hardware were used in both force and pressure tests. Increments of α due to sting bending in the force test were added to the nominal α 's for the pressure test. This gave reasonably accurate values of angle of attack, accuracy comparable to force test, when the pressure model was tested at the same Mach number and tunnel total pressure as the force model.

Pressure data were reduced to coefficient form and are tabulated along with wind tunnel parameters, configuration, and run number in the appendix. Plots are presented for both longitudinal and circumferential pressure distributions (C_p vs X/λ_B and C_p vs θ). These plots are shown for each Mach number, angle of attack, and roll position at which tests were conducted. In addition, the pressure coefficients were integrated to obtain the following missile axis force and moment coefficients:

DATA REDUCTION (Concluded)

$C_{N_m} = F_N/q S_{ref}$	normal force coefficient
$C_{Y_m} = F_Y/q S_{ref}$	side force coefficient
$C_{m_m} = M_Y/q S_{ref} l_{ref}$	pitching moment coefficient
$C_{n_m} = M_Z/q S_{ref} b_{ref}$	yawing moment coefficient
$C_{N'_m} = \partial C_N / \partial (X/D)$	local normal force coefficient
$C_{Y'_m} = \partial C_Y / \partial (X/D)$	local side force coefficient

Force and moment coefficients obtained from the integration of pressures are for comparison with the results from the force test.

Model reference dimensions used in the data reduction are presented in table VI. The axis system diagram is presented in figure 1. The missile axis system (x_m, y_m, z_m) is a non-rolling body axis system that is frequently used in wind tunnel tests and studies of missile flight dynamics. It is a system of axes that rotates with a missile or wind tunnel model through angles of sideslip and angles of attack but never through angles of roll; i.e., it never rotates about the missile or model longitudinal axis. The orientation of the missile axis coefficients is defined in figure 1. The missile axis system is identical with the body axis system at zero roll angle.

Moment reference point (MRP) for the 0.003-scale model is taken to be at the dry weight center of gravity of the ET. For the full-scale ET, the center of gravity is located at $X_T = 1395.4$ inches. Thus, the MRP for the 0.003-scale ET model is 3.259 inches from the model nose, on the centerline (figure 2a).

REFERENCES

1. NASA TMX-53185, "The George C. Marshall Space Flight Center's 14 x 14 Inch Trisonic Wind Tunnel Technical Handbook," Simon, Erwin; December 1964.
2. SA-A-74-9, "Space Shuttle External Tank Entry Force and Moment Wind Tunnel Test Requirements," Michna, D. J., Michoud Operations, Martin Marietta Corporation, February 1974.
3. NSI-M-9230-74-270, "A Pre-test Report for MSFC TWT 596, An Investigation to Determine the Static Pressure Distributions During Reentry of a 0.003-scale Modified MCR 200 Space Shuttle External Tank Model in the NASA-MSFC 14 x 14-Inch Trisonic Wind Tunnel," Robertson, M, K. and Winkler, G. W., April 1974.
4. DMS-DR-2145, NASA CR-134,420, "Static Stability Characteristics of the Space Shuttle External Tank (MSFC Model 458) During Reentry in the MSFC 14-inch TWT (TAIF)," by Ramsey, Paul E., Robertson, Michael K., and Winkler, Gary W. October 1974.

REFERENCE DRAWINGS

1. VL72-000106, 8-6-73; SRB to ET Aft Attach, Approved Link Concept, Shuttle Study; Rockwell International.
2. VL72-000088 "D", 8-3-73; Shuttle Configuration Control, MCR 0200 Baseline Rev. III, Dated 7-2-73; Rockwell International.
3. VL78-000031 "A", 6-29-73; Thermal Protection-External Tank MCR 0200 Baseline Dated 4-11-73; Rockwell International.
4. VL77-000051 "A", 9-10-73; SRB Single PT.-Fwd Thrust Fitting (MCR 0190 Rev. 3 Baseline 8-13-73); Rockwell International.
5. SS-A01176 (Wind Tunnel Model Group); Details - .015 Scale EOHT Attachments (140 A/B) (67-OTS) 11-20-73; Rockwell International.
6. VL78-000041 "B", 5-30-73; External Tank Configuration Control MCR 0200 Revision 1 Dated 5-16-73; Rockwell International.

Table I.

[illegible]

TABLE II.

TEST: MSFC TWT 596										DATE: 26 / 1974										
DATA SET/RUN NUMBER COLLATION SUMMARY																				
DATA SET IDENTIFIER	CONFIGURATION	SCHD. PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)				TEST RUN NUMBERS									
		α	β	OFF SET	ϕ		196	348	496											
R1A001	T ₁ (TAIL MOUNTED)	0	0	0	0	3	86	140	139											
002	E.T. WITH	-4				3	87	137	138											
003	PROTUBERANCES	0				5	88	136	135											
004		4				3	89	133	134											
005		8		Y		5	90	132	131											
006		12		20		3	85	141	142											
007		16				3	84	144	143											
008		20				3	83	145	146											
009		24				3	82	148	147											
010		28		Y	Y	3	81	149	150											
011		-8		0	90	3	80	170	169											
012		-4				3	79	167	168											
013		0				3	78	166	165											
014		4				3	77	163	164											
015		8		Y		3	76	162	161											
016		12		20		3	75	159	160											
017		16				3	74	158	157											
R1A018		20	Y	Y	Y	3	73	155	156											
1		7	13	19	25	31	37	43	49	55	61	67	75	76						
CR		COEFFICIENTS										IDVAR (1)	IDVAR (2)	NDV						

DATE: July 1974

MSEC - Form 263-2 (Rev. May 1973)

TABLE II. (Continued)

TEST: MSFC TWT 596										DATE: JULY 1974																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES			NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)						TEST RUN NUMBERS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		A	B	OFF-SET	MT.	Φ		196	348	496																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

TABLE II. (Continued)

[illegible]

TABLE II. (Continued)

TEST: MSFC TWT 596

DATE: July 1974

DATA SET/RUN NUMBER COLLATION SUMMARY

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES			NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)					
		α	β	OFF SET	MT.	ϕ		1.96	3.48	4.96			
R1A 061	T ₂ (SIDE-MOUNTED)	51	0	60	SIDE	0	3	60	11	2			
062	ET WITHOUT	54					3	59	4	3			
063	PROTUBERANCES	57					3	58	5	6			
064		60					3	57	8	7			
065		63					3	56	9	10			
066		66					3	55	12	11			
067		69					3	54	13	14			
068		70					3	53	16/1	15			
069		72					3	52	17	18			
070		75					3	51	20	19			
071		78					3	50	21	22			
072		80					3	49	24	23			
073		82					3	48	25	26			
074		85					3	47	28	27			
075		88					3	46	29	30			
076		90					3	45	32	31			
Y 077		92					3	44	33	34			
R1A 078	Y	95					3	43	36	35			

17131925313743495561677576

COEFFICIENTS

α OR β

SCHEDULES

γ C: 50° → 70°

α D: 70° → 90°

IOVAR (1)

IOVAR (2)

NDV

Q E: 50° → 100°

TABLE II. (Continued)

DATE: May 1974

DATA SET/RUN NUMBER COLLATION SUMMARY

TEST: MSFC TWT 596

[illegible]

TEST: MSFC TWT 59%

MSFC - Form 263-2 (Rev. May 1973)

TABLE II. (Concluded)

DATE: July 1954

DATA SET/RUN NUMBER COLLATION SUMMARY

TEST: MSFC TWT 596

[illegible]

TABLE III. MODEL DIMENSIONAL DATA

MODEL COMPONENT: EXTERNAL TANK - T₁₂

GENERAL DESCRIPTION: EXTERNAL OXYGEN - HYDROGEN TANK WITH OGIVE NOSE AND

SEMI-ELLIPTICAL TAIL. BEGINNING AT MODEL TANK STATION 0.927 AND ENDING AT STATION

6.522

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000041B

<u>DIMENSIONS:</u>	THEORETICAL	
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length	<u>1865 in.</u>	<u>5.595 in.</u>
Max. Width	<u>324 in.</u>	<u>0.972 in.</u>
Fineness Ratio	<u>5.756 in.</u>	<u>5.756 in.</u>
Max. Cross-Sectional	<u>572.555 ft²</u>	<u>0.742 in.²</u>
Base	<u>572.555 ft²</u>	<u>0.742 in.²</u>
WL OF TANK CENTERLINE	<u>400 in.</u>	<u>1.200 in.</u>

TABLE III. (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT₅

GENERAL DESCRIPTION: FORWARD ORBITER/ET ATTACH STRUCTURE

(2 MEMBERS)

MODEL SCALE: 0.003

REFERENCE DRAWING: VL72-000088D

ALL DIMENSIONS IN INCHES MODEL SCALE

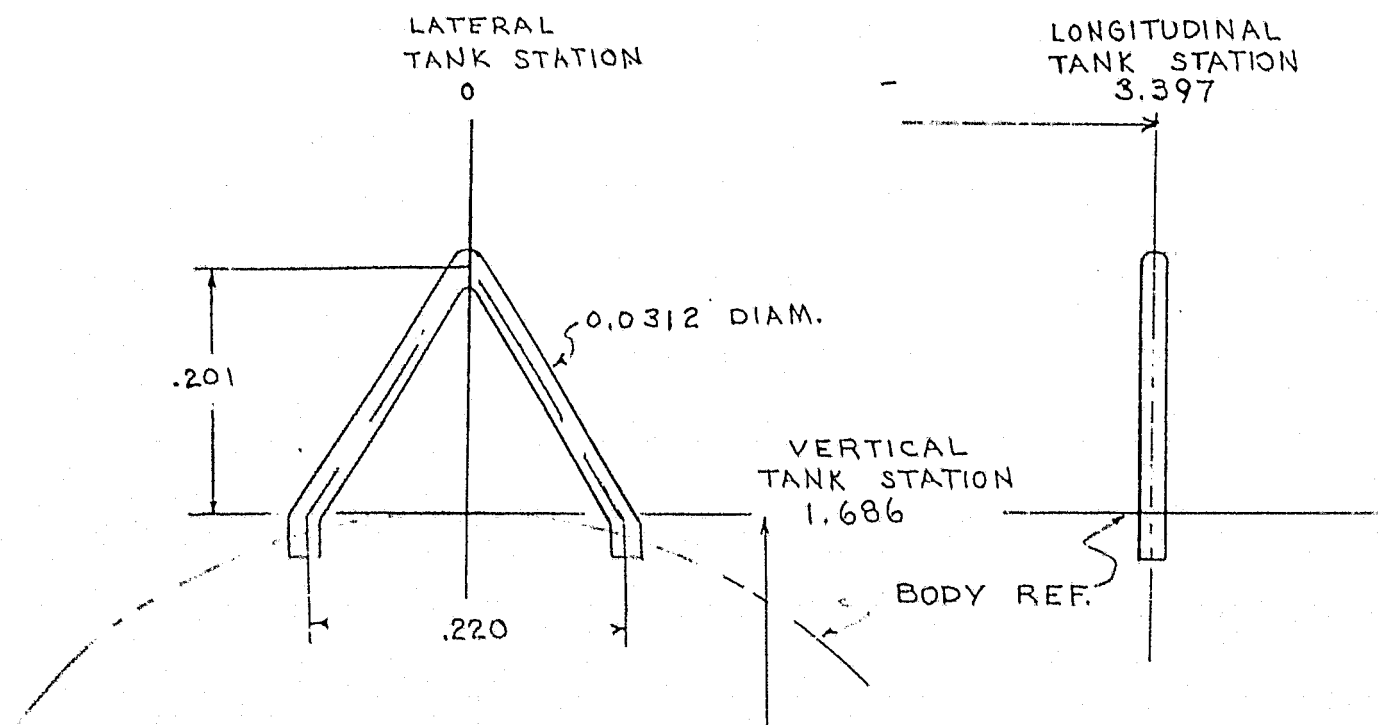


TABLE III. (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT₆

GENERAL DESCRIPTION: LEFT REAR ORBITER/ET ATTACH STRUCTURE (2 MEMBERS)

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000050

ALL DIMENSIONS IN INCHES MODEL SCALE

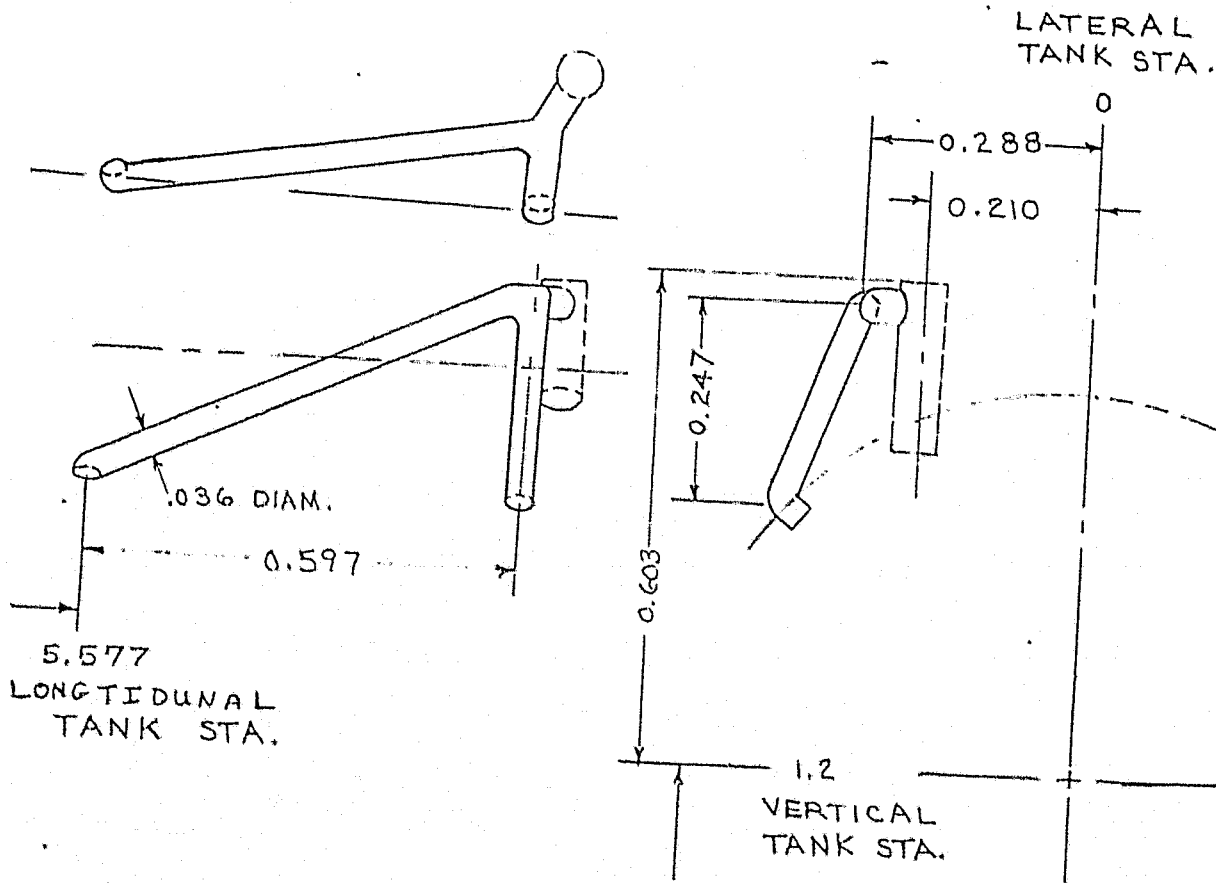


TABLE III. (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT₇

GENERAL DESCRIPTION: RIGHT REAR ORBITER/ET ATTACH STRUCTURE (3 MEMBERS)

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000050

ALL DIMENSIONS IN INCHES MODEL SCALE

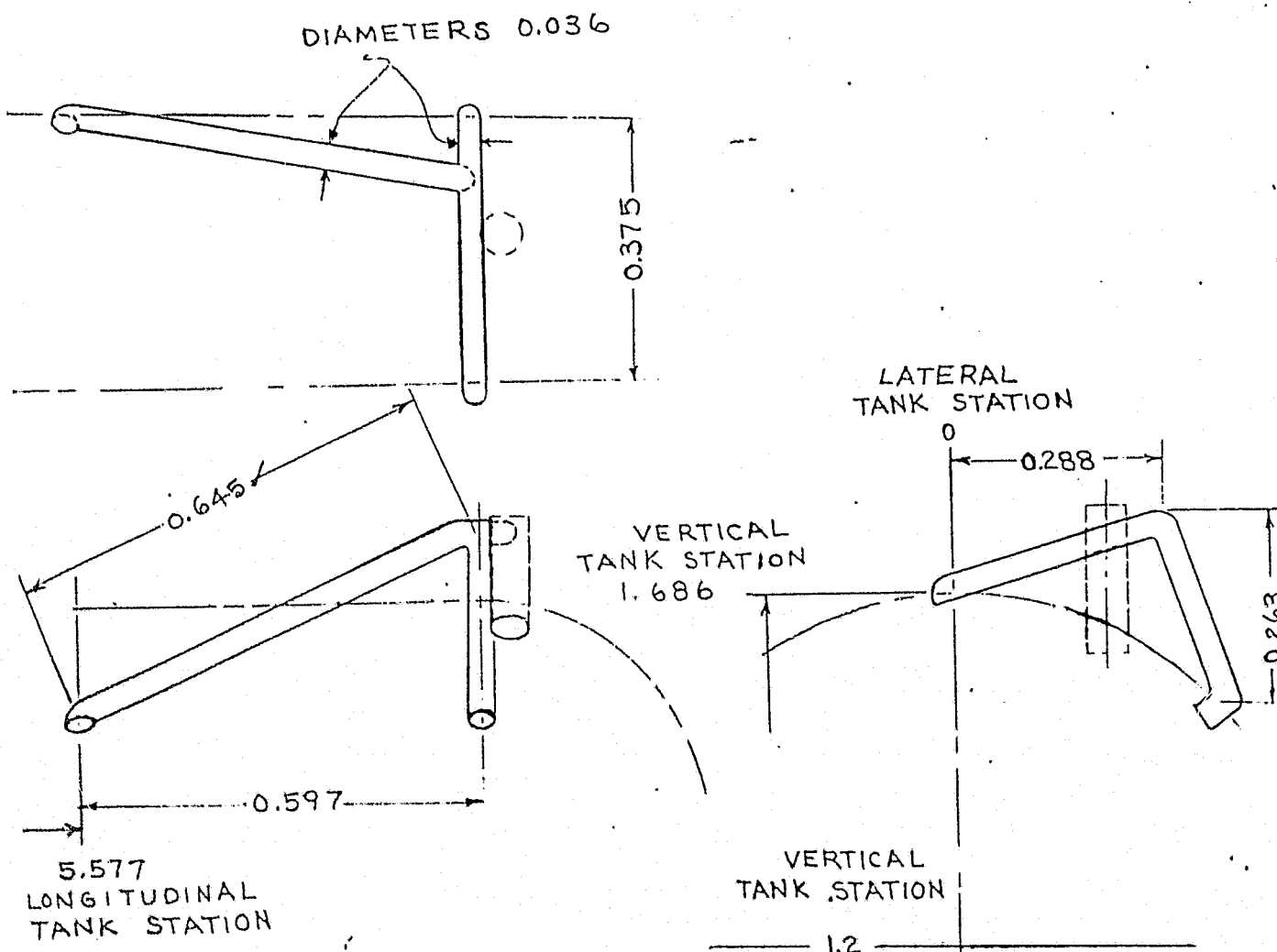


TABLE III. (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT_g

GENERAL DESCRIPTION: FORWARD SRB/ET ATTACH STRUCTURE (ET PORTION TESTED ONLY)

MODEL SCALE: 0.003

REFERENCE DRAWING: VL77-000051A

ALL DIMENSIONS IN INCHES MODEL SCALE

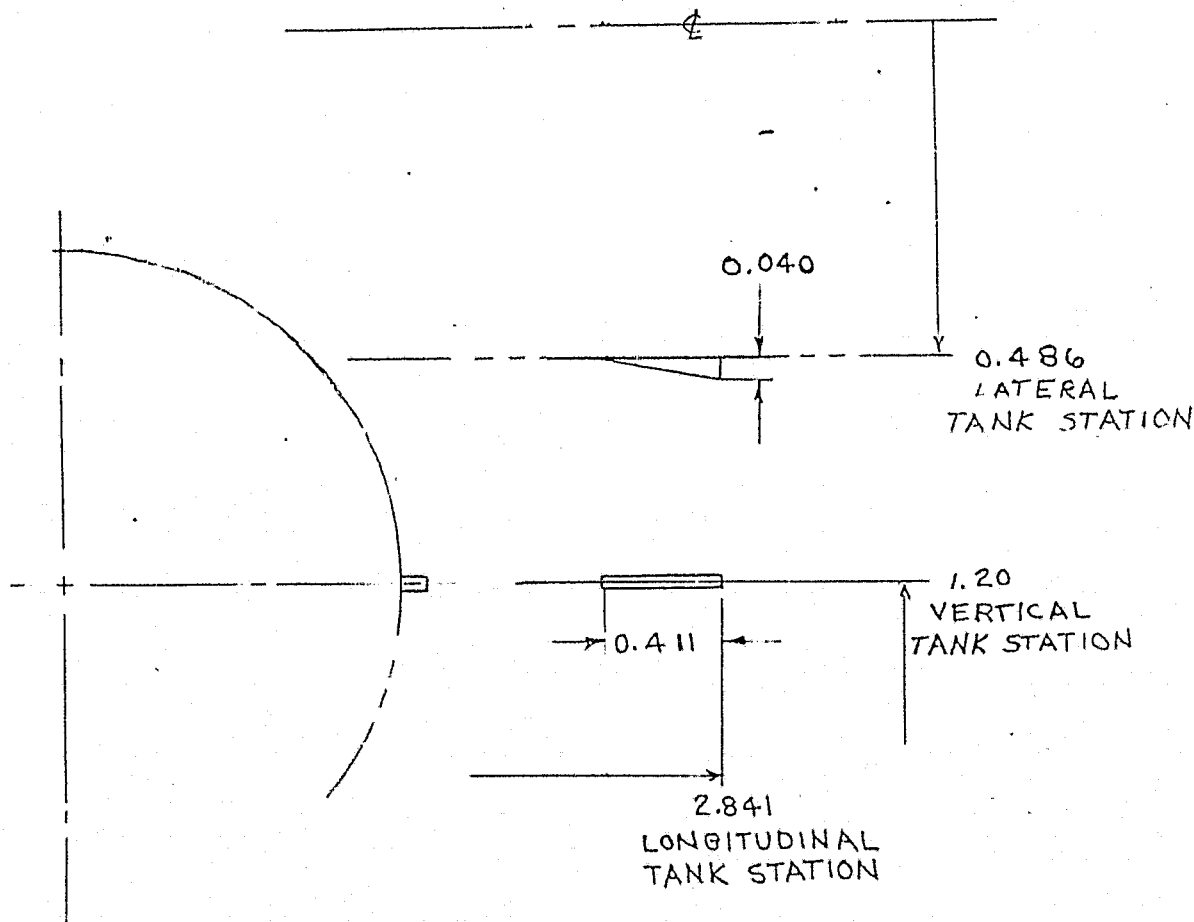


TABLE III. (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT₉

GENERAL DESCRIPTION: AFT SRB/ET ATTACH STRUCTURE (3 MEMBERS) (ET PORTION TESTED ONLY)

MODEL SCALE: 0.003

REFERENCE DRAWING: VL72-000106

ALL DIMENSIONS IN INCHES MODEL SCALE

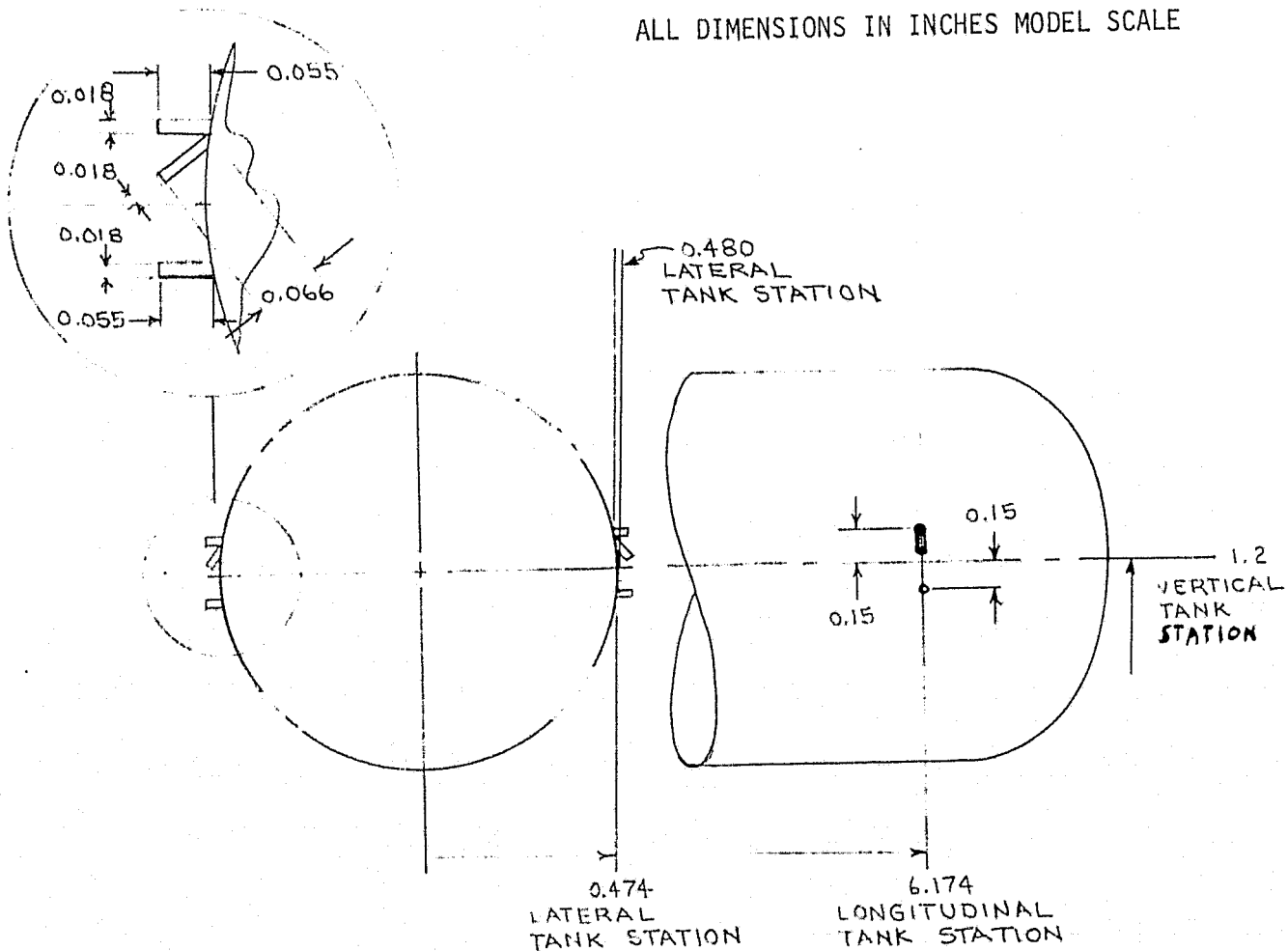


TABLE III. (Continued)

MODEL COMPONENT: LOX VENT LINE FAIRING - PT_T

GENERAL DESCRIPTION: VENT LINE ALONG UPPER RIGHT SIDE OF ET OGIVE NOSE

BEGINNING AT MODEL STATIONS $X_T = 0.927$, $Y_T = 0$, AND $Z_T = 1.2$; TERMINATING AT

$X_T = 2.841$, $Y_T = 0.162$, $Z_T = 1.658$

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000031A

DIMENSIONS:	THEORETICAL	
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length	<u>638 in.</u>	<u>1.914 in.</u>
Max. Width	<u>17.7 in.</u>	<u>0.053 in.</u>
Max. Depth	<u>9.3 in.</u>	<u>0.028 in.</u>
Radial Position	<u>19 1/2°</u>	<u>19 1/2°</u>

TABLE III. (Continued)

MODEL COMPONENT: LOX FEED LINE - PT₂

GENERAL DESCRIPTION: LONGITUDINAL FUEL LINE ALONG UPPER RIGHT SIDE OF ET

BEGINNING AT MODEL STATIONS $X_T = 2.841$, $-Y_T = 0.194$, AND $Z_T = 1.645$; TERMINATING
AT $X_T = 6.116$, $-Y_T = 0.194$, AND $Z_T = 1.645$

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000031A

<u>DIMENSIONS:</u>	THEORETICAL	
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length	<u>1092 in.</u>	<u>3.275 in.</u>
Max. Width	<u>30.7 in.</u>	<u>0.092 in.</u>
Max. Height	<u>28 in.</u>	<u>0.084 in.</u>
Radial Position	<u>23 1/2°</u>	<u>23 1/2°</u>

TABLE III. (Continued)

MODEL COMPONENT: LH₂ FEED LINE - PT₃

GENERAL DESCRIPTION: LONGITUDINAL FUEL LINE ALONG UPPER LEFT SIDE OF ET

BEGINNING AT MODEL STATIONS $X_T = 2.841$, $Y_T = 0.275$, AND $Z_T = 1.601$

TERMINATING AT STATIONS $X_T = 6.116$, $Y_T = 0.275$, AND $Z_T = 1.601$

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000031A

<u>DIMENSIONS:</u>	THEORETICAL	
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length	<u>1092 in.</u>	<u>3.275 in.</u>
Max. Width	<u>25.7 in.</u>	<u>0.077 in.</u>
Max. Depth	<u>14.7 in.</u>	<u>0.044 in.</u>
Radial Position	<u>-33°</u>	<u>-33°</u>

TABLE III. (Continued)

MODEL COMPONENT: LOX FEED LINE - FL₁

GENERAL DESCRIPTION: 18-INCH DIAMETER VERTICAL FUEL LINE AT AFT END OF ET ON
RIGHT

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000050

ALL DIMENSIONS IN INCHES MODEL SCALE

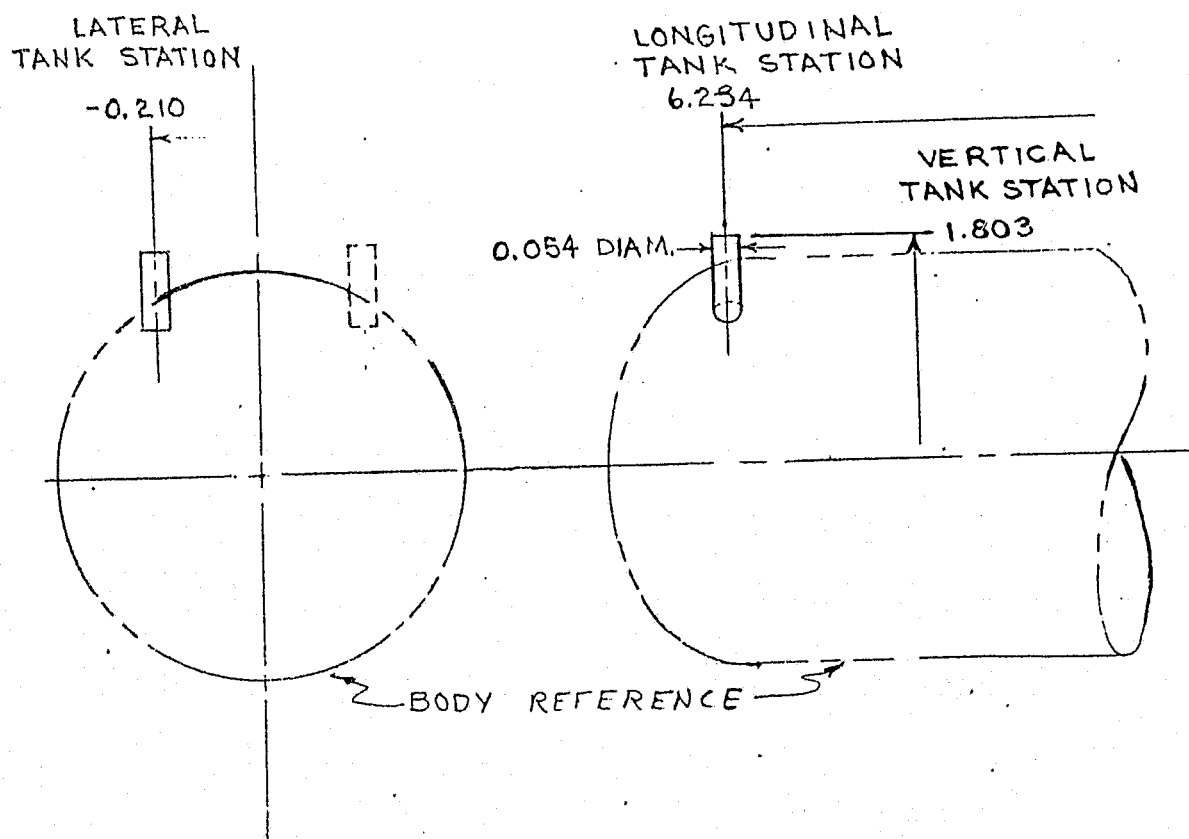


TABLE III. (Continued)

MODEL COMPONENT: LH₂ FEED LINE - FL₂

GENERAL DESCRIPTION: 18-INCH DIAMETER VERTICAL FUEL LINE AT AFT END OF ET
ON LEFT

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000050

ALL DIMENSIONS IN INCHES MODEL SCALE

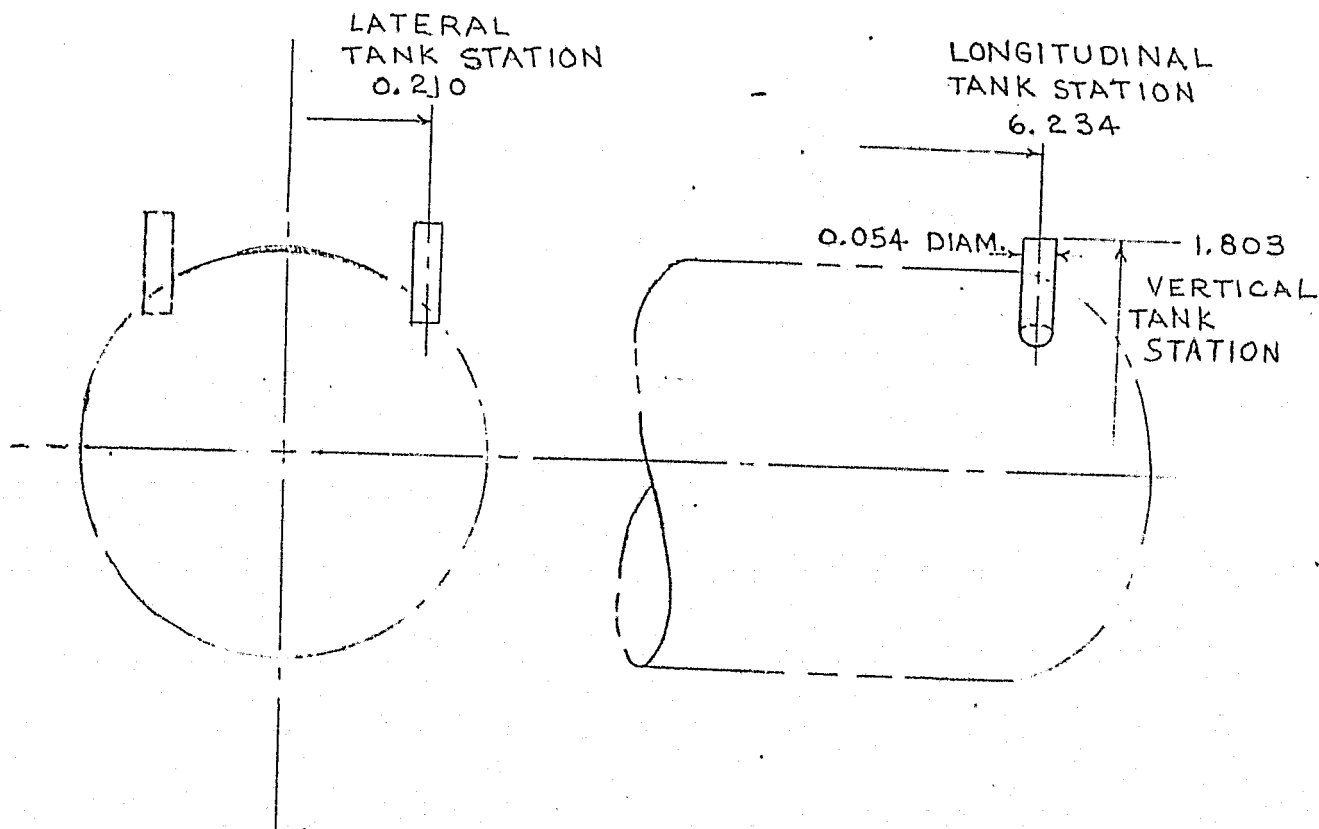


TABLE III. (Concluded)

MODEL COMPONENT: ATTACH STRUCTURE - FR₆

GENERAL DESCRIPTION: AFT ET/ORBITER CROSS MEMBER (CROSS SECTION 11 IN. x 15 IN.)

LOCATED AT ET-STATION 2050.5

MODEL SCALE: 0.003

REFERENCE DRAWING: FIGURE 3, MARTIN MARIETTA MEMO SA-A-74-9

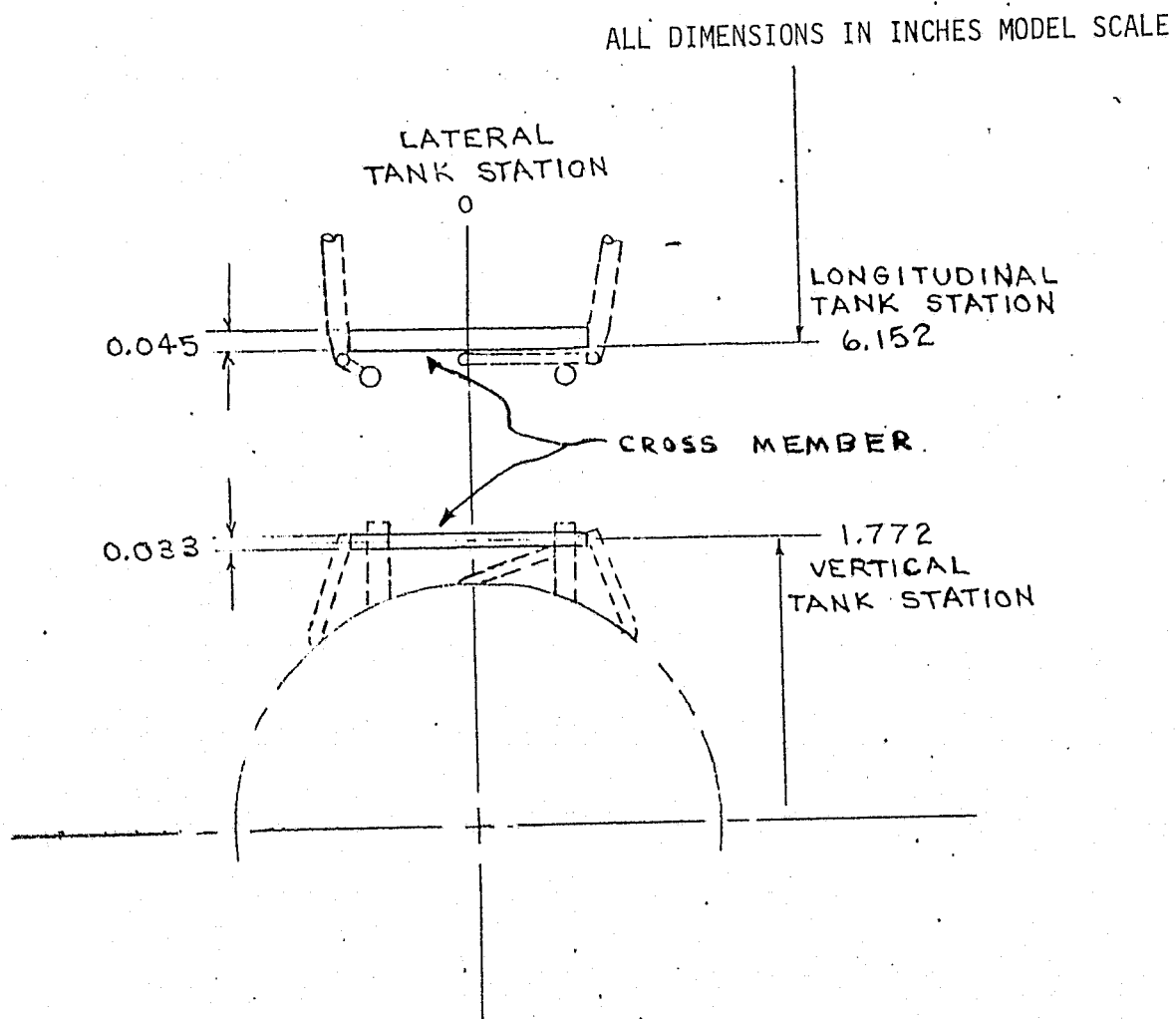


TABLE IV. TABULATED DATA PRINT-OUT FORMAT AND CORRELATION BETWEEN TUBE NUMBER, ORIFICE NUMBER, AND ORIFICE LOCATION ON MODEL

*inoperable orifice

SIDE-MOUNTED ET (T₂ CONFIGURATION)

	0.055	0.108	0.162	0.216	0.322	0.518	0.610	0.735	0.860	0.872	0.923	0.954
0.305	0.605	0.905	1.205	1.800	2.900	3.410	4.110	4.810	4.985	5.160	5.335	
1	2	3	4	5	6	7	8	9	10	11	12	
O A	1	2	3	4	5	*6	*7	8	9	10	11	12
14 B	12	14	15	16	*17	*18	19	20	21	22	23	
24 C									24	25	26	27
45 D	28	29	30	31	32	33	34	35	36	37	38	39
67½ E	40	41	42	43	44	45	46	47	48	49	50	
90 F	51	52	53	54	55	56	57	58	59	60	61	62
112½ G	63	64	65	66	67	68	69	70	71	72	73	
135 H	74	75	76	77	78	79	80	81	82	83	84	85
157½ I	86	87	88	89	90	91	92	93	94	95	96	
180 J	97	98	99	100	101	102	103	104	105	106	107	108
202½ K	109	110	111	112	113	114	115	116	117	118	119	
225 L	120	121	122	123	124	125	126	127	128	129	130	131
247½ M	132	133	134	135	136	137	138	139	140	141	142	
270 N	143	144	145	146	147	148	149	150	151	152	153	154
292½ O	155	156	157	158	159	160	161	162	163	164	165	
315 P	166	167	168	169	170	171	172	173	174	175	176	177
326 Q									178	179	180	181
346 R	182	183	184	185	*186	*187	188	189	190	191	192	

X/2 B
LONG. STA. X (In.)
LONG STA. NO.
RADIAL ROW NO.
RADIAL LOCATION θ
(deg.)

TABLE IV. TABULATED DATA PRINT-OUT FORMAT AND CORRELATION BETWEEN TUBE NUMBER, ORIFICE NUMBER, AND ORIFICE LOCATION ON MODEL (CONCLUDED)

SIDE-MOUNTED ET (T₂ CONFIGURATION) * inoperable orifice

	0.055	0.108	0.162	0.216	0.322	0.518	0.610	0.735	0.860	0.892	0.923	0.954
O	1	2	3	4	5	* 6	* 7	8	9	10	11	12
14	X	13	14	15	16	* 17	* 18	19	20	21	22	23
24	X	X	X	X	X	X	X	X	24	25	26	27
45	28	29	30	31	32	33	34	35	36	37	38	39
67½	X	40	41	42	43	44	45	46	47	48	49	50
90	51	52	53	54	55	56	57	58	59	60	61	62
112½	X	63	64	65	66	67	68	69	70	71	72	73
135	74	75	76	77	78	79	80	81	82	83	84	85
157½	X	86	87	88	89	90	91	92	93	94	95	96
180	97	98	99	100	101	102	103	104	105	106	107	108
202½	X	109	110	111	112	113	114	115	116	117	118	119
225	120	121	122	123	124	125	126	127	128	129	130	131
247½	X	132	133	134	135	136	137	138	139	140	141	142
270	143	144	145	146	147	148	149	150	151	152	153	154
292½	X	155	156	157	158	159	160	161	162	163	164	165
315	166	167	168	169	170	171	172	173	174	175	176	177
326	X	X	X	X	X	X	X	X	178	179	180	181
346	X	182	183	184	185	* 186	* 187	188	189	190	191	192

X/L
LONG. STA. X (In.)
LONG. STA. No.
CIRCUM. ROW
CIRCUM. STA
θ(deg.)

TABLE V. TABULATED DATA PRINT-OUT FORMAT AND CORRELATION BETWEEN TUBE NUMBER, ORIFICE NUMBER, AND ORIFICE LOCATION ON MODEL

* inoperable orifice

TAIL-MOUNTED ET (T₁ CONFIGURATION)

X/φ B
LONG. STA. X (in.)
LONG. STA. NO.
RADIAL ROW NO.
RADIAL LOCATION θ
(deg.)

	0.055	0.108	0.162	0.216	0.322	0.518	0.610	0.735	0.860	0.892	0.923	0.954
0.305	0.605	0.905	1.205	1.800	2.900	3.410	4.110	4.810	4.985	5.160	5.335	
1	2	3	4	5	6	7	8	9	10	11	12	
0 A	1	2	3	4	5	6	7	8	9	10	11	12
14 B	13	14	15	16	17	18	19	20	21	22	23	24
24 C												
45 D	28	29	30	31	32	33	34	35	36	37	38	39
67½ E	40	41	42	43	44	45	46	47	48	49	50	51
90 F	51	52	53	54	55	56	57	58	59	60	61	62
112½ G	63	64	65	66	67	68	69	70	71	72	73	74
135 H	74	75	76	77	78	79	80	81	82	83	84	85
157½ I	86	87	88	89	90	91	92	93	94	95	96	97
180 J	98	99	100	101	102	103	104	105	106	107	108	109
202½ K	109	110	111	112	113	114	115	116	117	118	119	120
225 L	121	122	123	124	125	126	127	128	129	130	131	132
247½ M	132	133	134	135	136	137	138	139	140	141	142	143
270 N	143	144	145	146	147	148	149	150	151	152	153	154
292½ O	155	156	157	158	159	160	161	162	163	164	165	166
315 P	167	168	169	170	171	172	173	174	175	176	177	178
326 Q												
346 R	182	183	184	185	186	187	188	189	190	191	192	193

TABLE V. TABULATED DATA PRINT-OUT FORMAT AND CORRELATION BETWEEN TUBE NUMBER, ORIFICE NUMBER, AND ORIFICE LOCATION ON MODEL (CONCLUDED)

TAIL-MOUNTED ET (T₁ CONFIGURATION) * inoperable orifice

	0.055	0.108	0.162	0.216	0.322	0.518	0.610	0.735	0.860	0.892	0.923	0.954
0.305	0.605	0.905	1.205	1.800	2.900	3.410	4.110	4.810	4.985	5.160	5.335	
1	2	3	4	5	6	7	8	9	10	11	12	
A	1	2	3	4	5	6	7	8	9	10	11	12
B	13	14	15	16	17	18	19	20	21	22	23	
C	X	X	X	X	X	X	X	24	25	26	27	
D	28	29	30	31	32	33	34	35	36	37	38	39
E	X	40	41	42	43	44	45	46	47	48	49	50
F	51	52	53	54	55	56	57	58	59	60	61	62
G	X	63	64	65	66	67	68	69	70	71	72	73
H	74	75	76	77	78	79	80	81	82	83	84	85
I	X	86	87	88	89	90	91	92	93	94	95	96
J	97	98	99	100	101	102	103	104	105	106	107	108
K	X	109	110	111	112	113	114	115	116	117	118	119
L	120	121	122	123	124	125	126	127	128	129	130	131
M	X	132	133	134	135	136	137	138	139	140	141	142
N	143	144	145	146	147	148	149	150	151	152	153	154
O	X	155	156	157	158	159	160	161	162	163	164	165
P	166	167	168	169	170	171	172	173	174	175	176	177
Q	X	X	X	X	X	X	X	X	178	179	180	181
R	X	182	183	184	185	186	187	188	189	190	191	192

X/L
LONG. STA. X (In.)
LONG. STA. No.
CIRCUM. ROW
CIRCUM. STA
θ(deg.)

Table VI.

0.003-SCALE 324-INCH ET REFERENCE DIMENSIONS

DIMENSION	FULL SCALE	MODEL SCALE
Reference Area, S_{ref} (cross-sectional area of ET)	572.555 FT ²	0.742 IN. ²
Reference Length, l_{ref} (ET diameter)	324 IN.	0.972 IN.
Reference Span, b_{ref} (ET diameter)	324 IN.	0.972 IN.
Moment Reference Point, MRP (dry weight c.g.)		
XMRP (from nose)	1086.4 IN.	3.259 IN.
YMRP	0	0
ZMRP (model centerline)	400 IN.	1.2 IN.
Base Area, A_b (cross-sectional area of ET)	572.555 FT ²	0.742 IN. ²

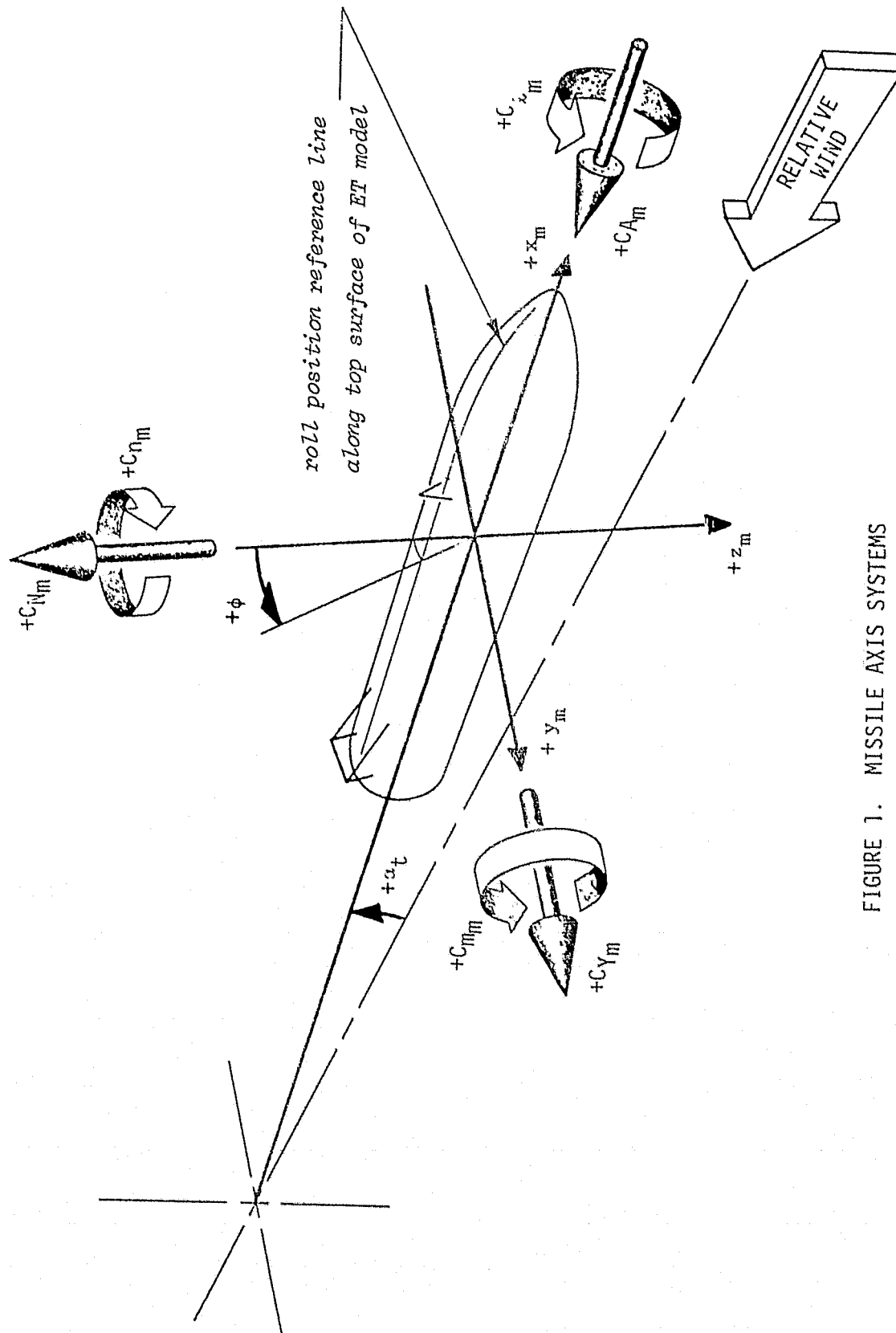
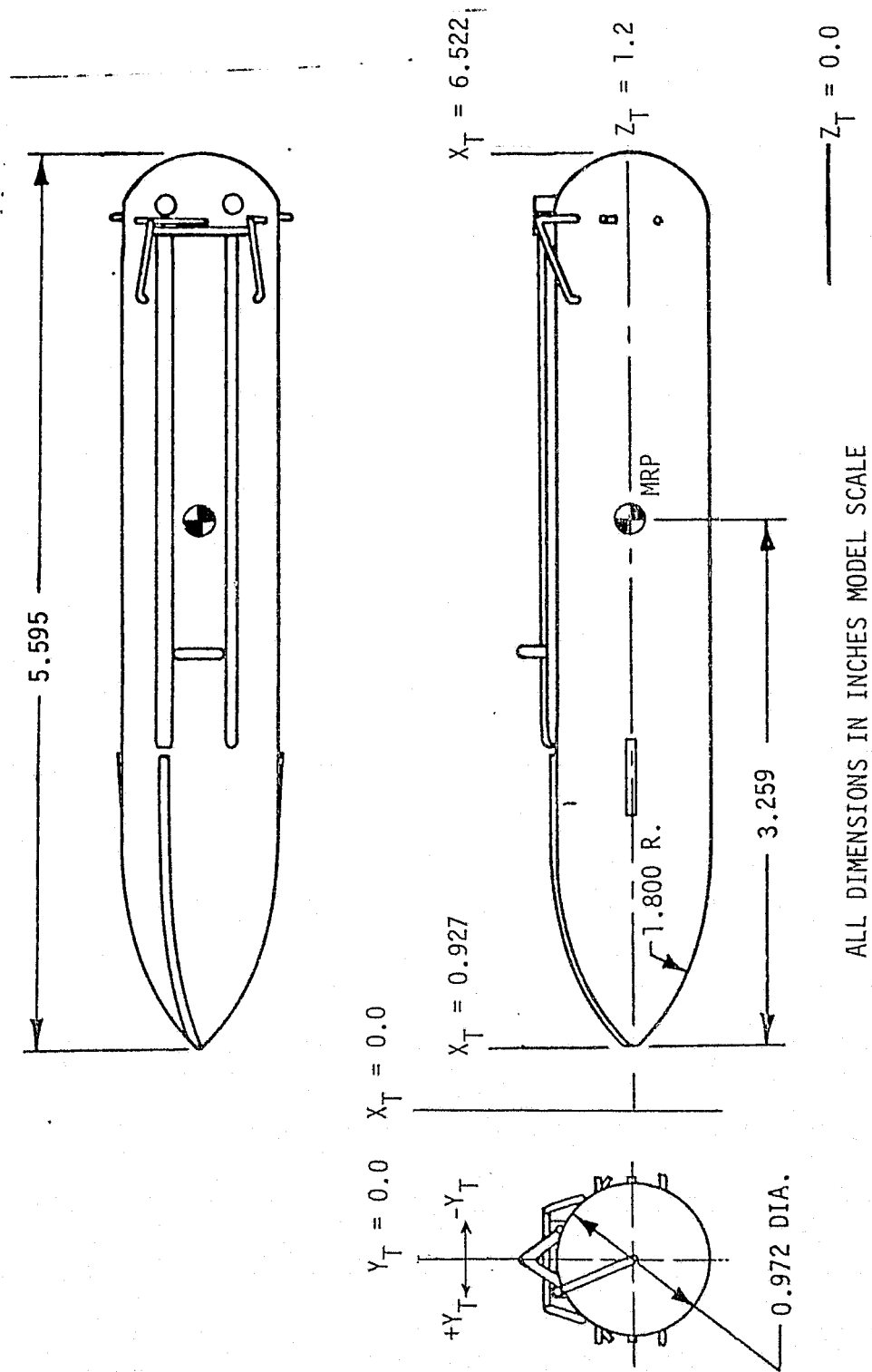
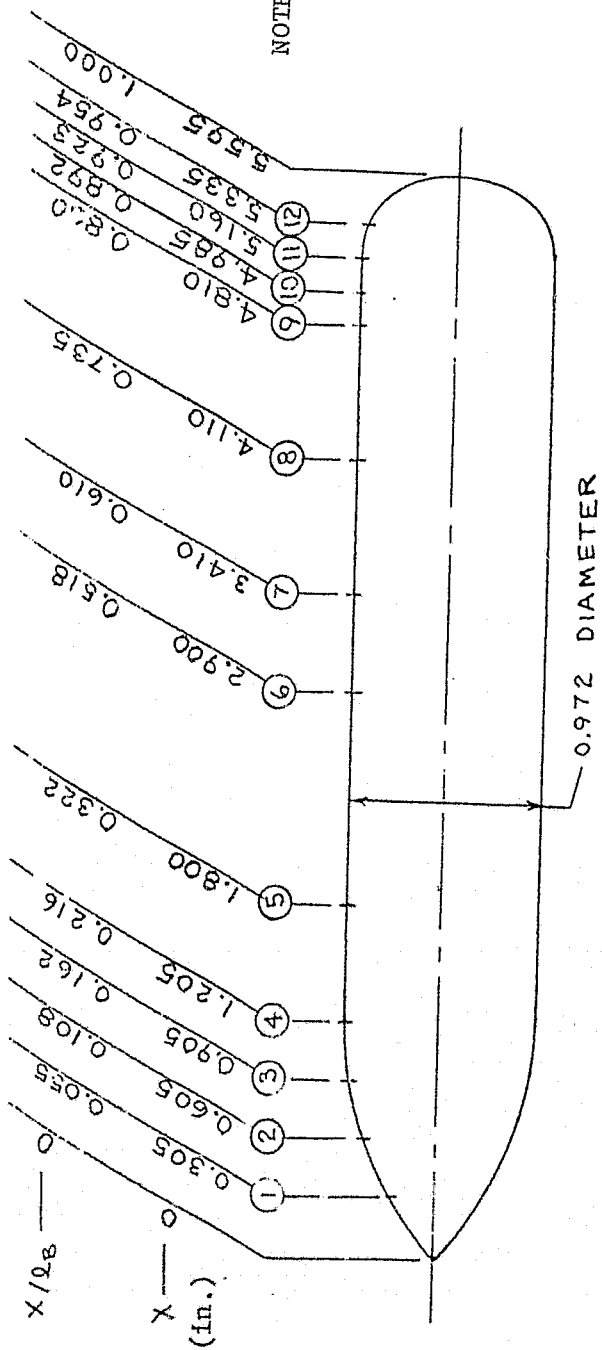


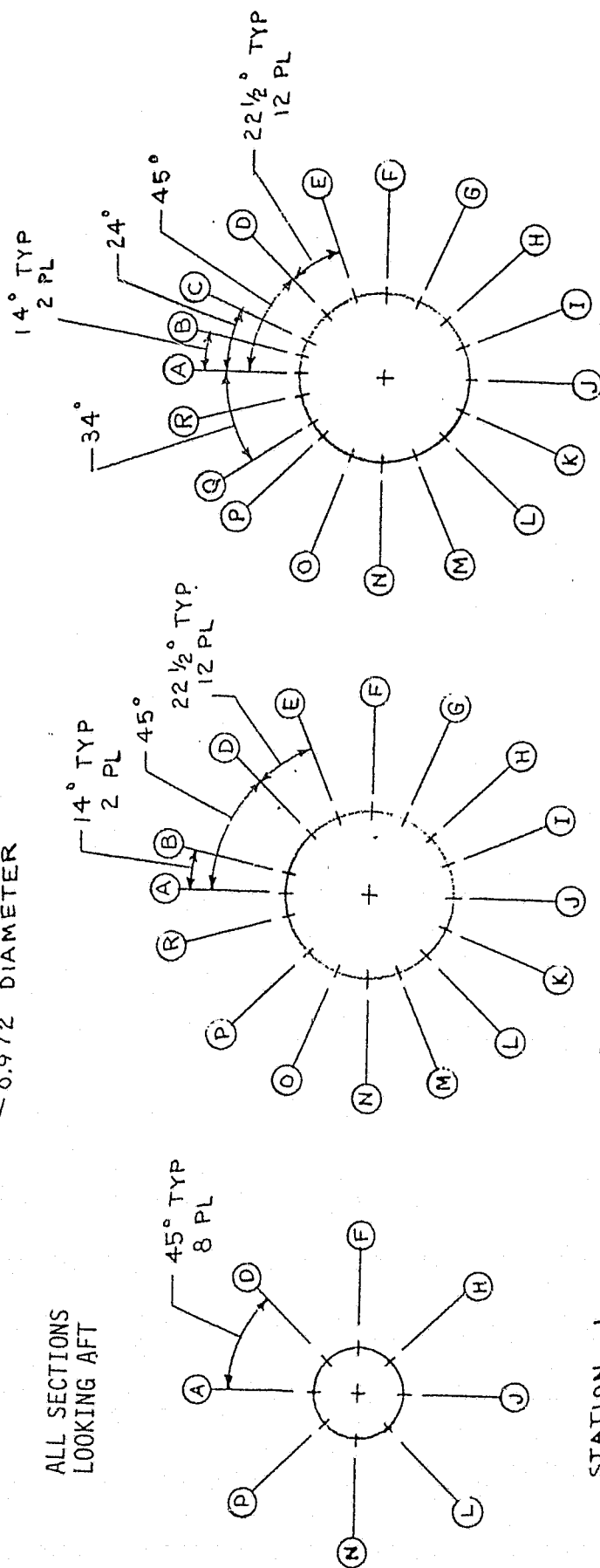
FIGURE 1. MISSILE AXIS SYSTEMS



a. GENERAL ARRANGEMENT OF MSFC MODEL NO. 460, CONFIGURATION T₁ EXTERNAL TANK WITH PROTUBERANCES
Figure 2. MODEL SKETCHES

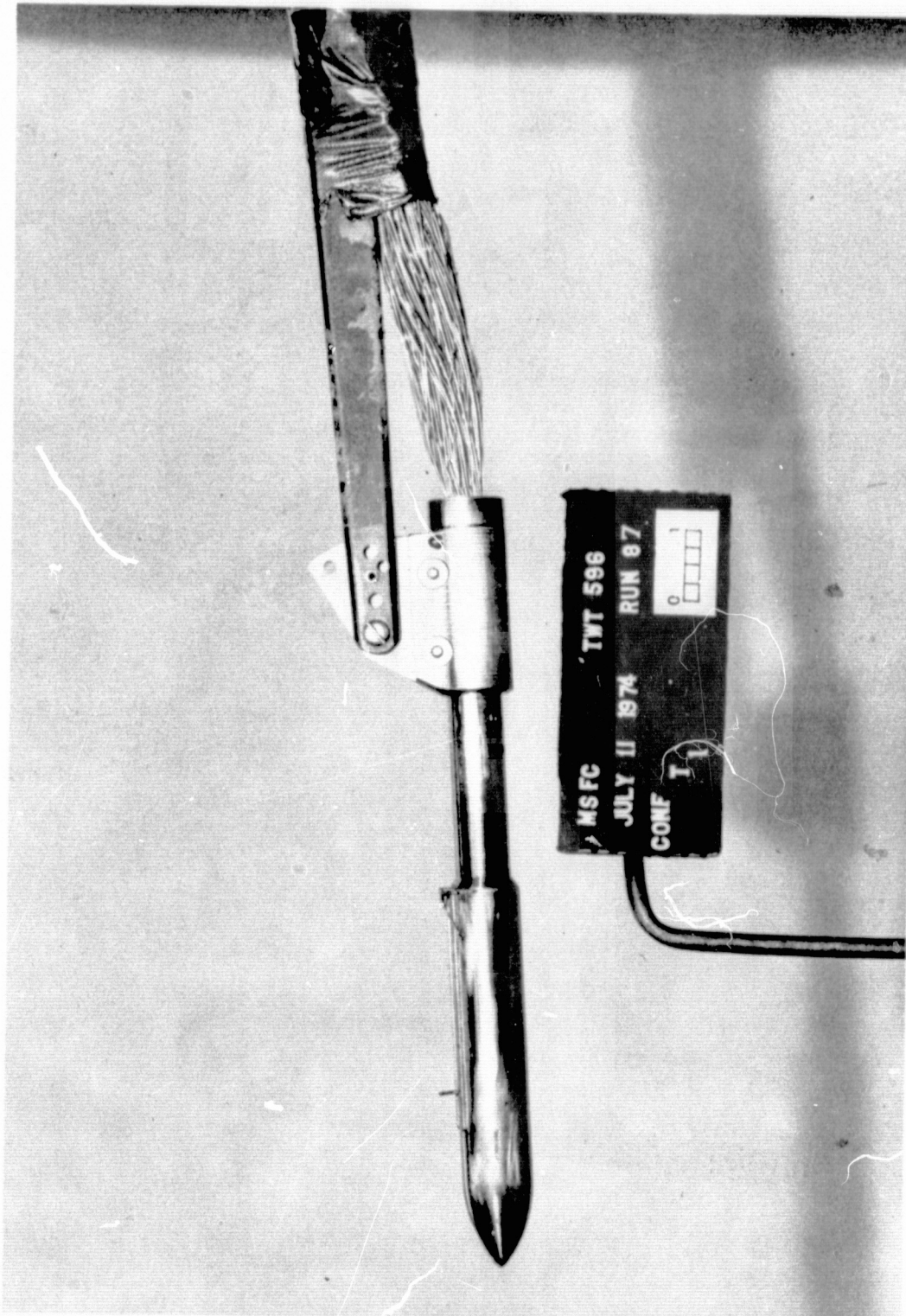


NOTE: ○ Denotes longitudinal and radial location of orifices. (192 total, though some may be missing due to sting cavities or protuberances.)



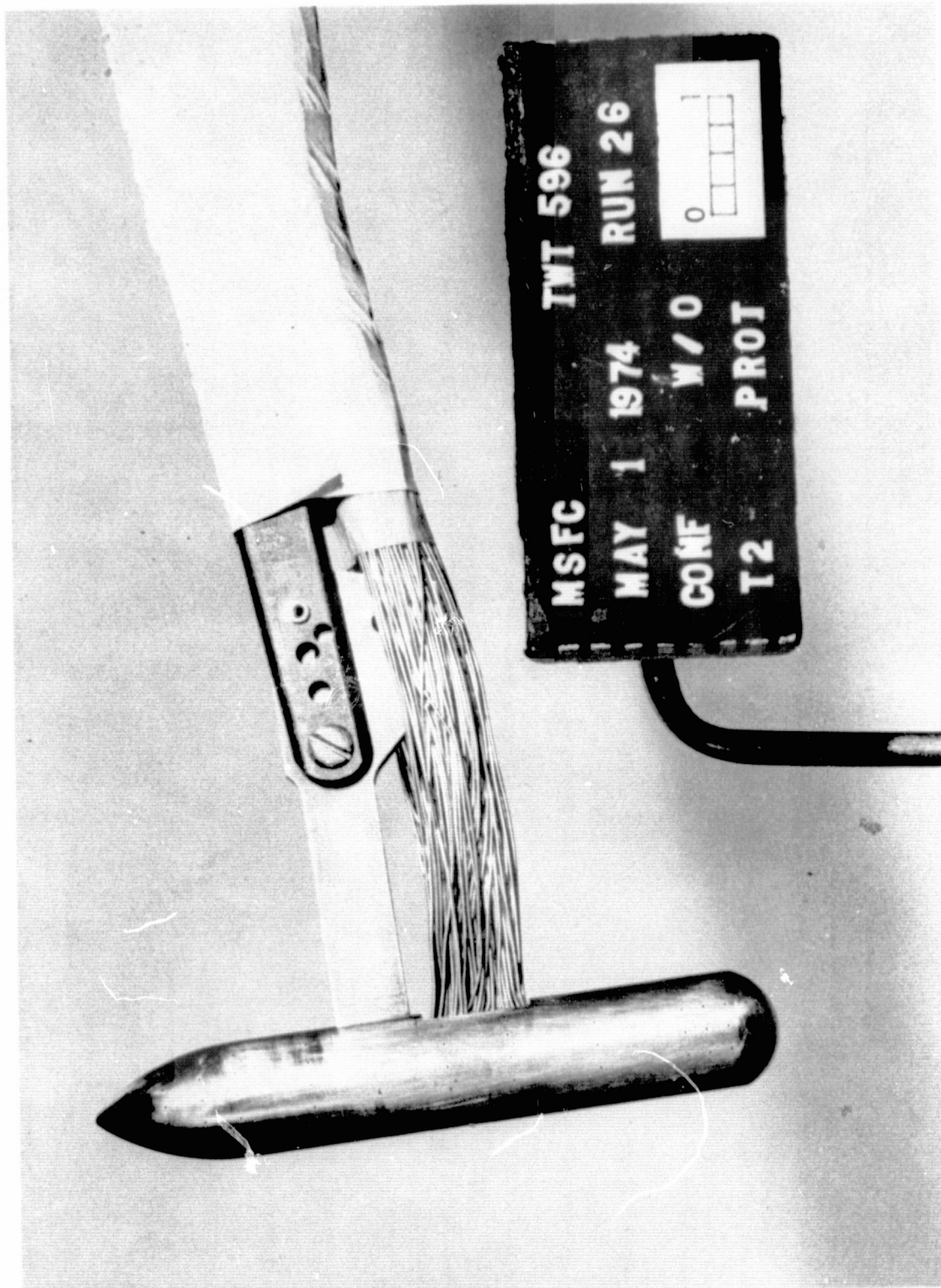
b. EXTERNAL TANK MODEL PRESSURE ORIFICE LOCATIONS

Figure 2. CONCLUDED



EXTERNAL TANK MODEL NO. 460, CONFIGURATION T₁ TAIL-MOUNTED WITH PROTUBERANCES
Figure 3. MODEL PHOTOGRAPHS

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR



b. EXTERNAL TANK MODEL NO. 460, CONFIGURATION T₂ SIDE-MOUNTED WITHOUT PROTUBERANCES
Figure 2. CONCLUDED

DATA FIGURES

VOLUME 1--Pages 1-720
VOLUME 2--Pages 721-1200
VOLUME 3--Pages 1201-2000
VOLUME 4--Pages 2001-2740

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (A1AX01)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	-8.380	0.000	OFFSET	SREF 572.5550 SQ. FT
□	-4.330	1.000	PHI	LREF 324.0000 INCHES
◇	-2.280			BREF 324.0000 INCHES
△	3.790			XMRP 1086.4000 IN. XT
	7.860			YMRP .0000 IN. YT
				ZMRP 400.0000 IN. ZT
				SCALE .0030

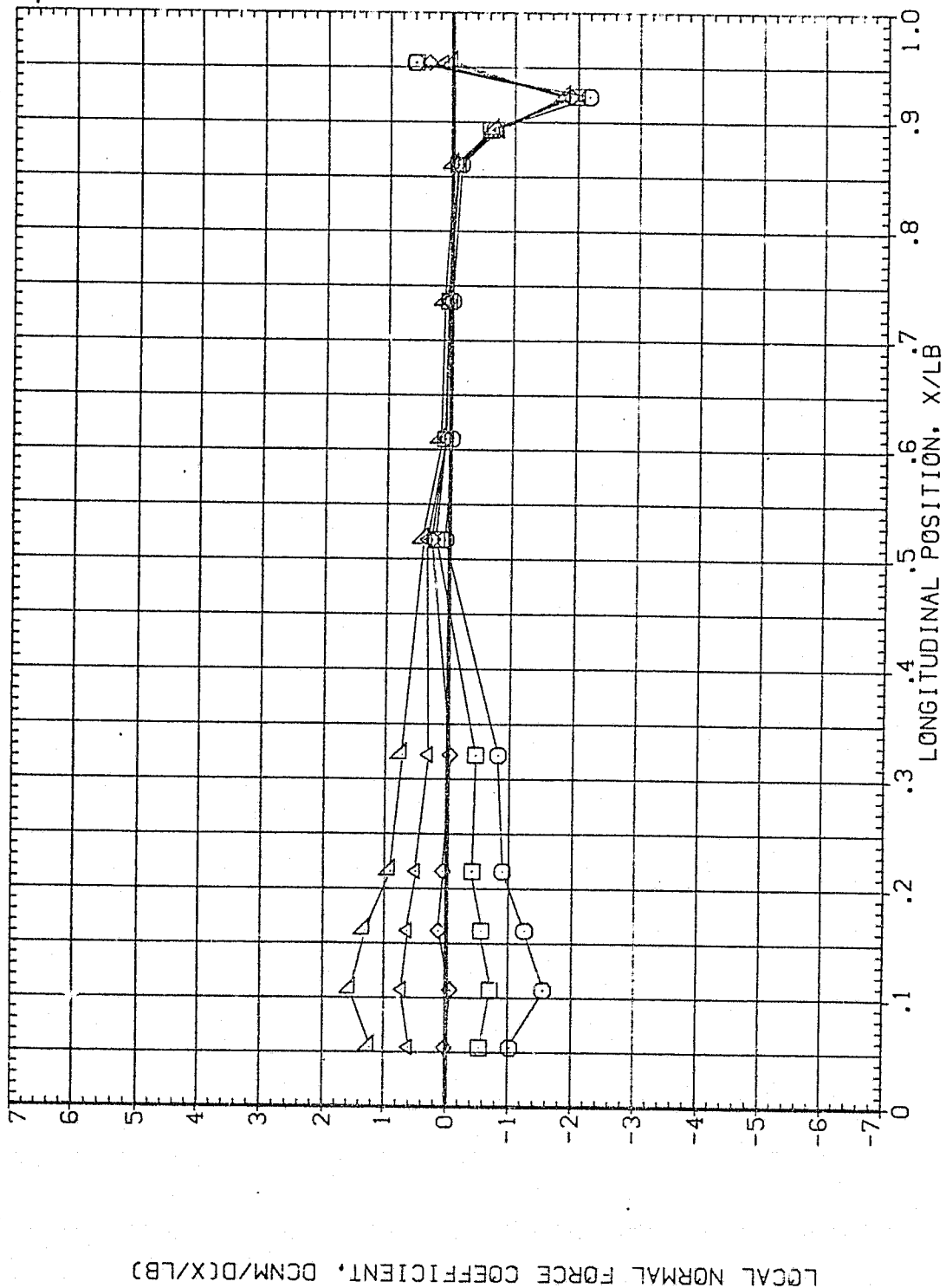


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 1.96

SYMBOL
 ○
 □
 ◇
 △

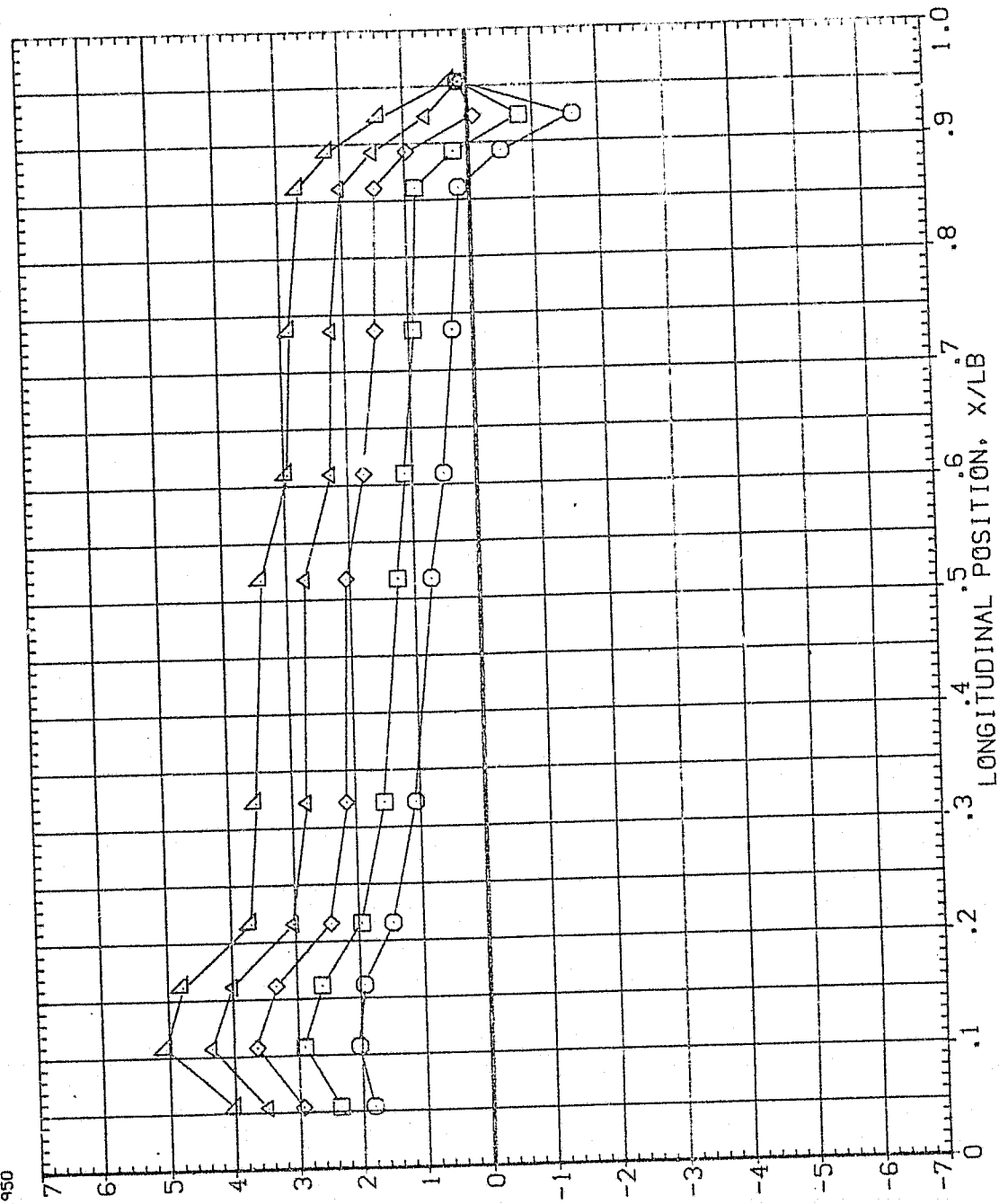
ALPHA
 12.570
 16.660
 20.740
 24.850
 28.950

BETA
 .000
 1.000
 .000
 .000
 .000

PARAMETRIC VALUES
 OFFSET
 PHI

SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XMRP 1086.4000
 YMRP .0000
 ZMRP 400.0000
 SCALE .0030

REFERENCE INFORMATION
 SQ. FT
 INCHES
 IN. XT
 IN. YT
 IN. ZT



LOCAL NORMAL FORCE COEFFICIENT, DCNM/DC(X/LB)

FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 1.97

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (A1AX11)

SYMBOL
 ○ □ ◇ △ ▽

ALPHA
 -8.380
 -4.330
 -.280
 3.790
 7.940

PARAMETRIC VALUES
 BETA .000
 MOUNT 1.000
 OFFSET PHI 90.000

REFERENCE INFORMATION
 SREF 572.5550 SO. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. X
 YMRP .0000 IN. Y
 ZMRP 400.0000 IN. Z
 SCALE .0030

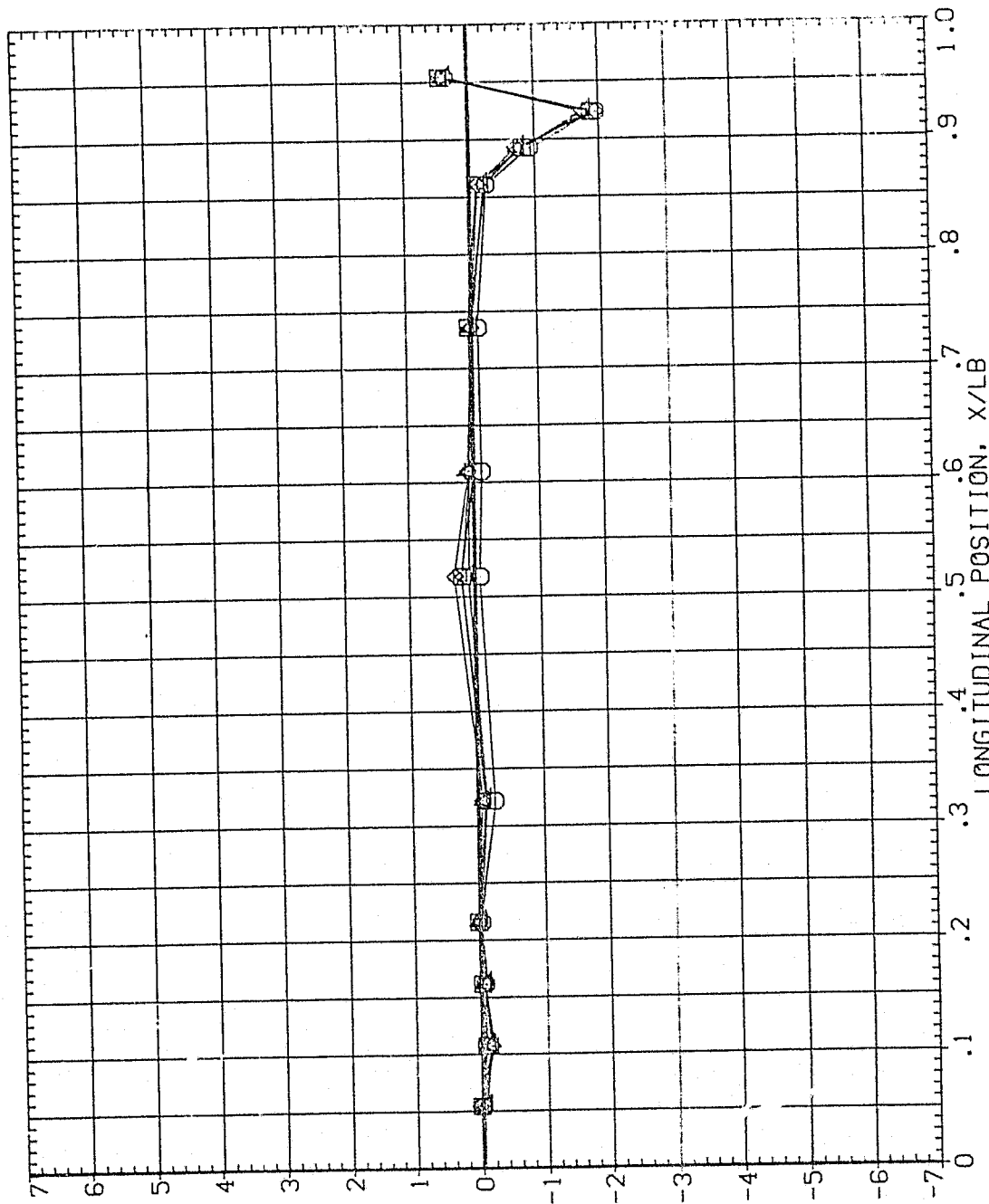


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(MACH = 1.96)

REPRODUCIBILITY OF THE
 ORIGINAL PAGE IS POOR

SYMBOL		PARAMETRIC VALUES		REFERENCE INFORMATION	
□	ALPHA	BETA	.000	OFFSET	20.000
	12.550	16.660	1.000	PHI	90.000
	16.660	20.740			
	20.740	24.850			
	24.850	28.930			
◇	SREF				572.5550
△	LREF				324.0000
▽	BREF				324.0000
	XHRP				1086.4000
	YHRP				.0000
	ZHRP				400.0000
	SCALE				.0030

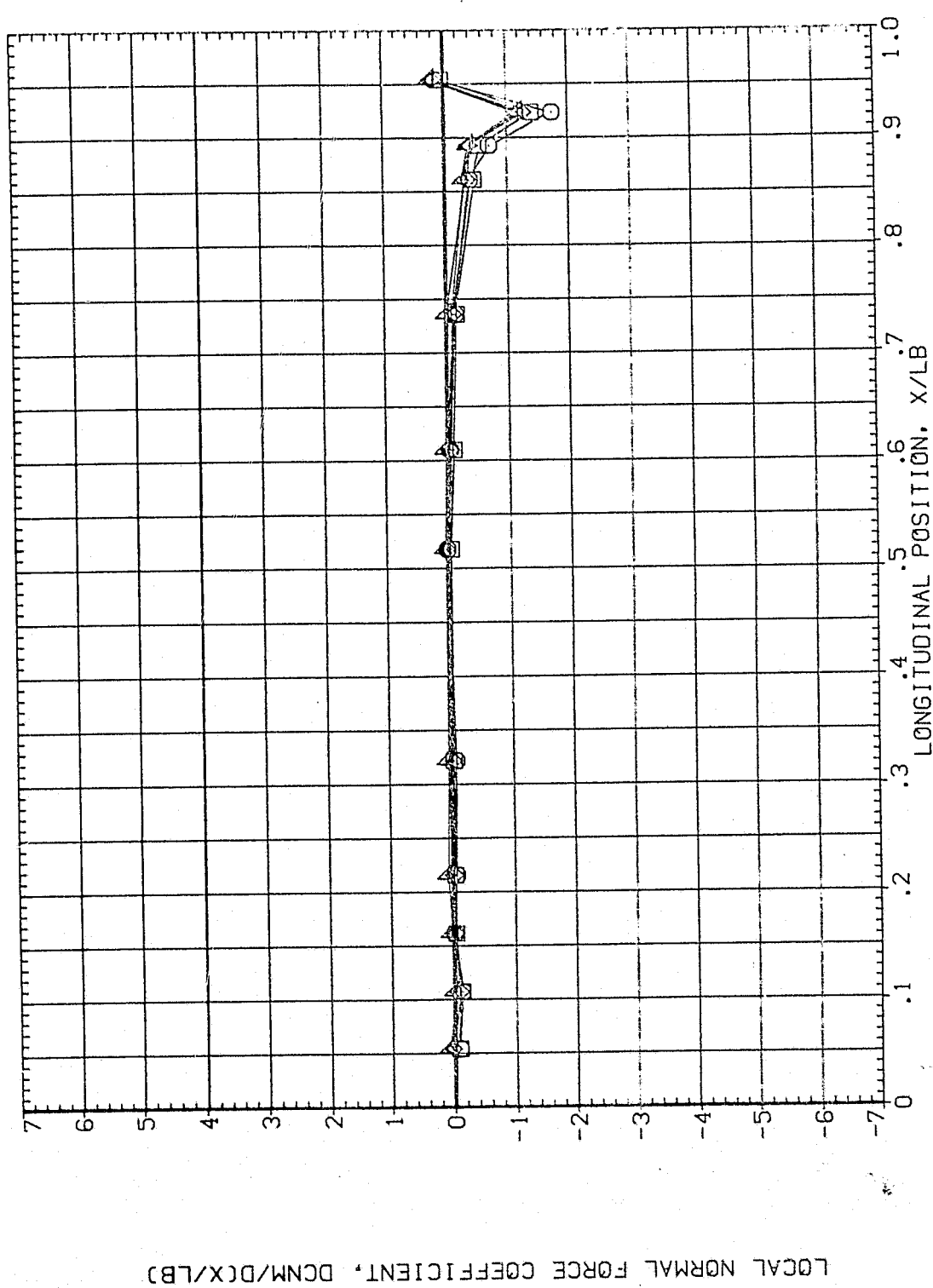


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(MACH = 1.96)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (A1AX31)

SYMBOL		PARAMETRIC VALUES		REFERENCE INFORMATION	
○	ALPHA	BETA	OFFSET	SREF	SC, FT
□	-8.380	MOUNT	.000	LREF	INCHES
◇	-4.330		1.000	BREF	INCHES
△	-1.290		PHI	XMRP	IN, YI
▽	3.770			YMRP	IN, ZI
	7.420			ZMRP	
				SCALE	.0032

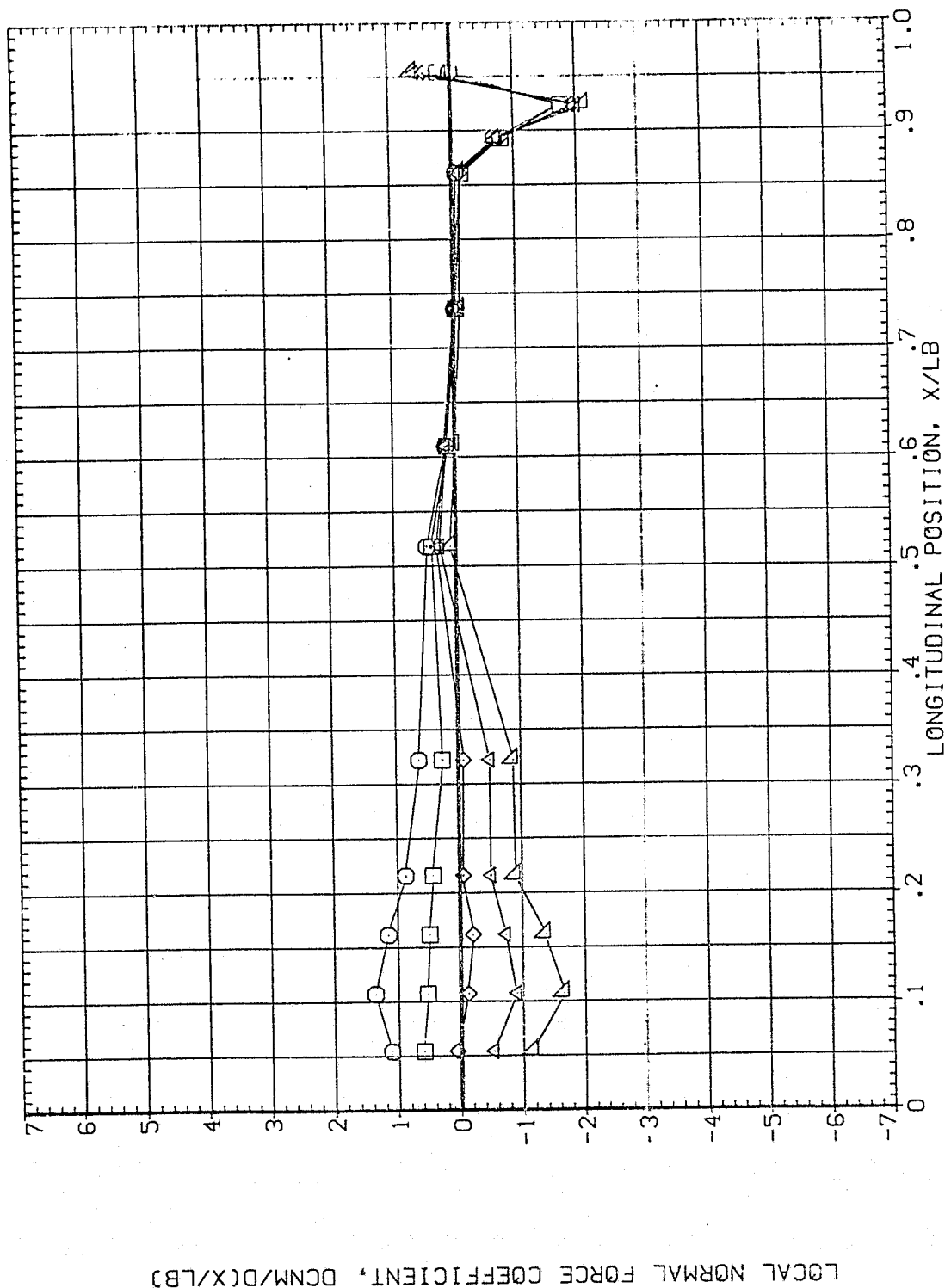


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 1.96

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	OFFSET	SREF	572.5550	SO. FT
○	12.570	16.660	.000	LREF	324.0000	INCHES
□	20.740	20.740	1.000	BREF	1086.4000	IN. XT
◇	24.870	24.870	1.000	XMRP	400.0000	IN. YT
△	28.930	28.930	1.000	ZMRP	400.0000	IN. ZT
				SCALE	.0030	

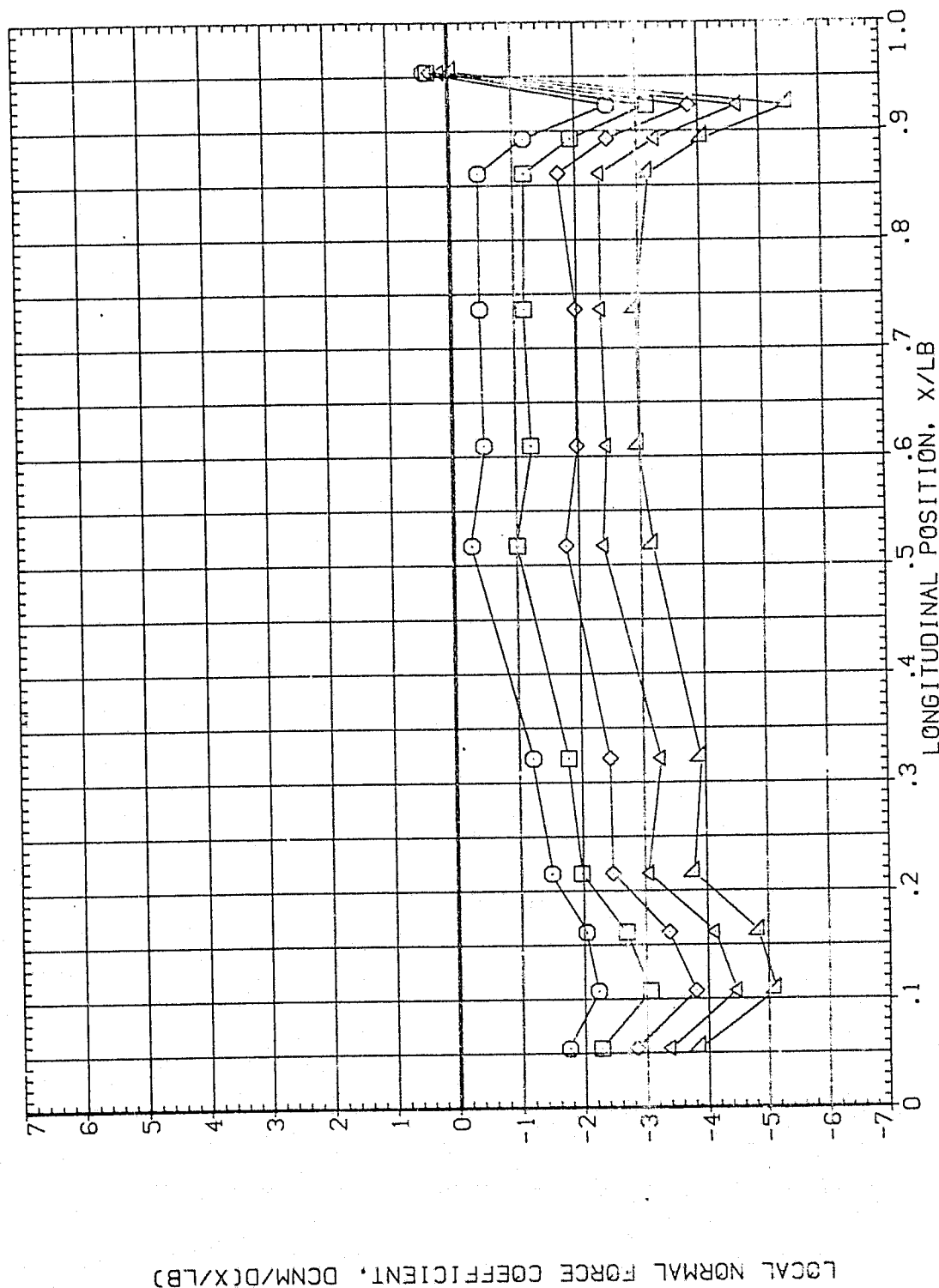


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 1.97

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (A1AX51)

SYMBOL ALPHA BETA HOUNT
 -8.380
 -4.350
 -.280
 3.770
 7.860

PARAMETRIC VALUES
 .000 .000
 1.000 PHI 270.000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XMRP 1086.4000
 YMRP .0000
 ZMRP 400.0000
 SCALE .0030

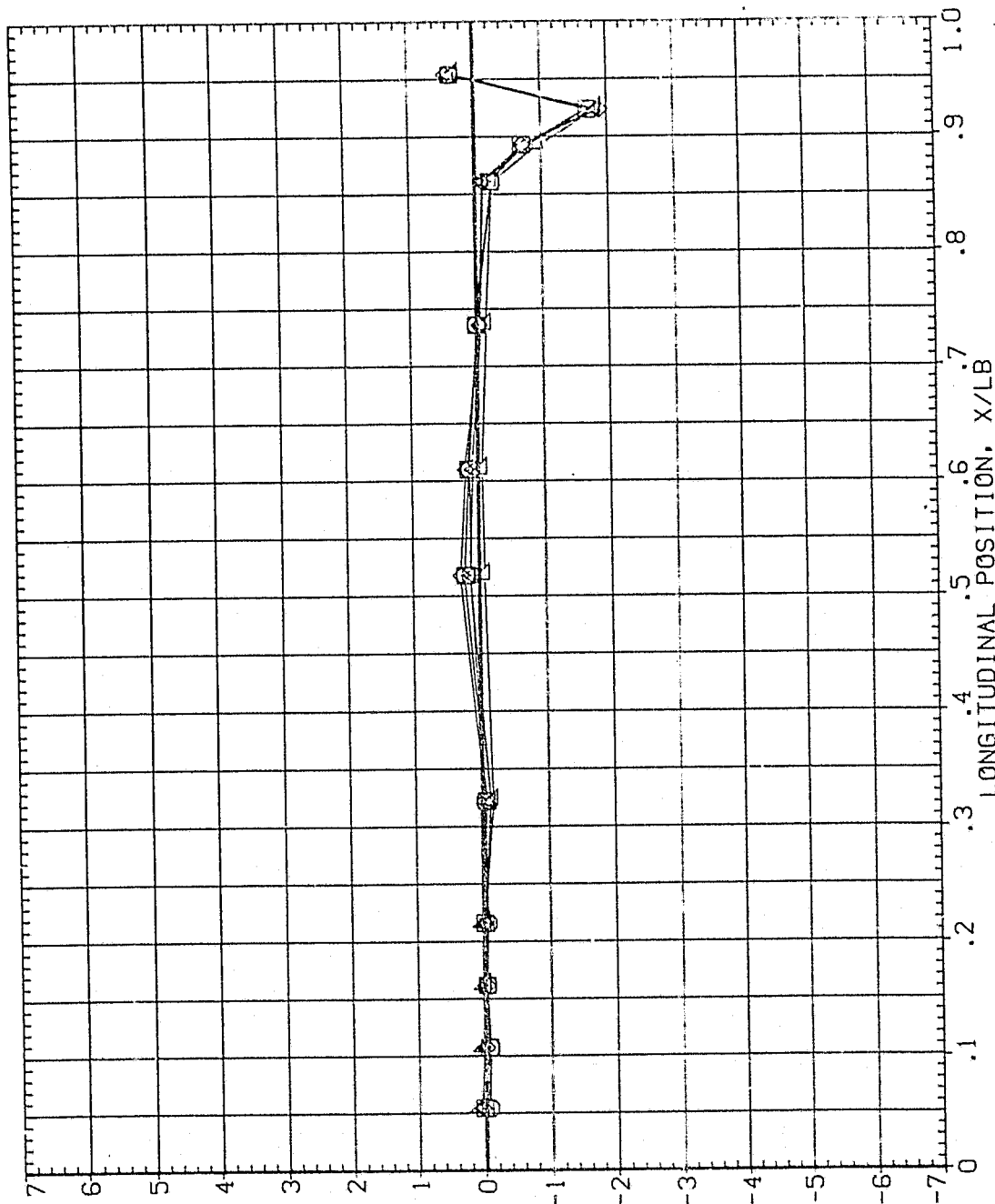


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 1.95

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES
○	12.570	0.000	OFFSET 20.000
□	16.640	1.000	PHI 270.000
◇	20.740		
△	24.850		
▽	28.930		

REFERENCE INFORMATION	SO. FT
SREF	572.5350
LREF	324.0000
BREF	324.0000
XHRP	1086.4000
YHRP	.0000
ZHRP	400.0000
SCALE	.0030

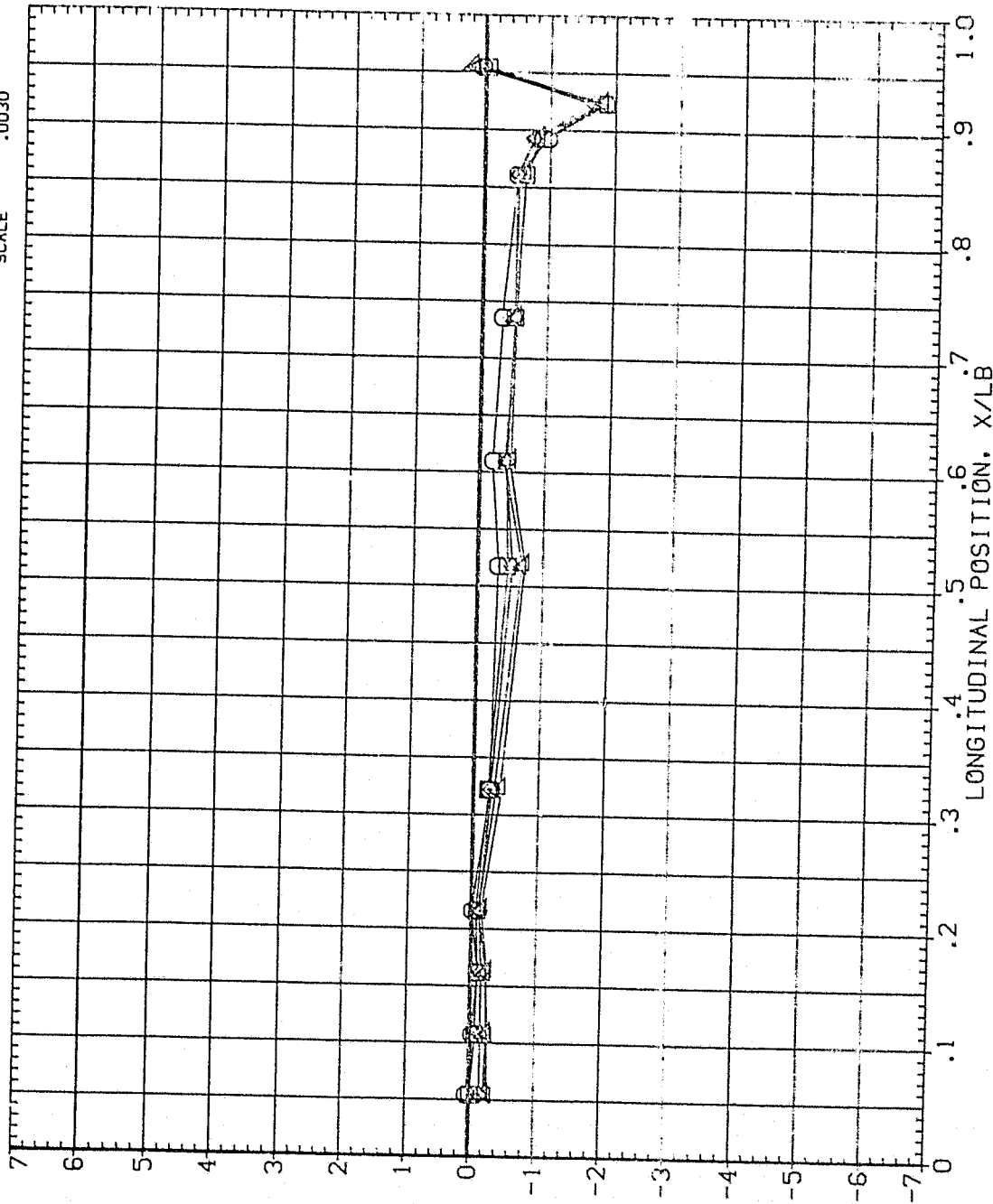


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES
(MACH = 1.97)

(N1A0013)

SYMBOL

ALPHA	BETA	MOUNT
-8.360		
-4.330		
-.280		
3.770		
7.800		

PARAMETRIC VALUES

.000	OFFSET
1.000	PHI

000' 000'

REFERENCE INFORMATION	
SREF	572.5550 SQ. FT
LRFF	324.0000 INCHES
LEFF	324.0000 INCHES
SBREF	324.0000 IN. YI
XHREF	1086.4000 IN. YI
YHREF	.0000 IN. YI
ZHREF	400.0000 IN. YI
SCALE	.0030

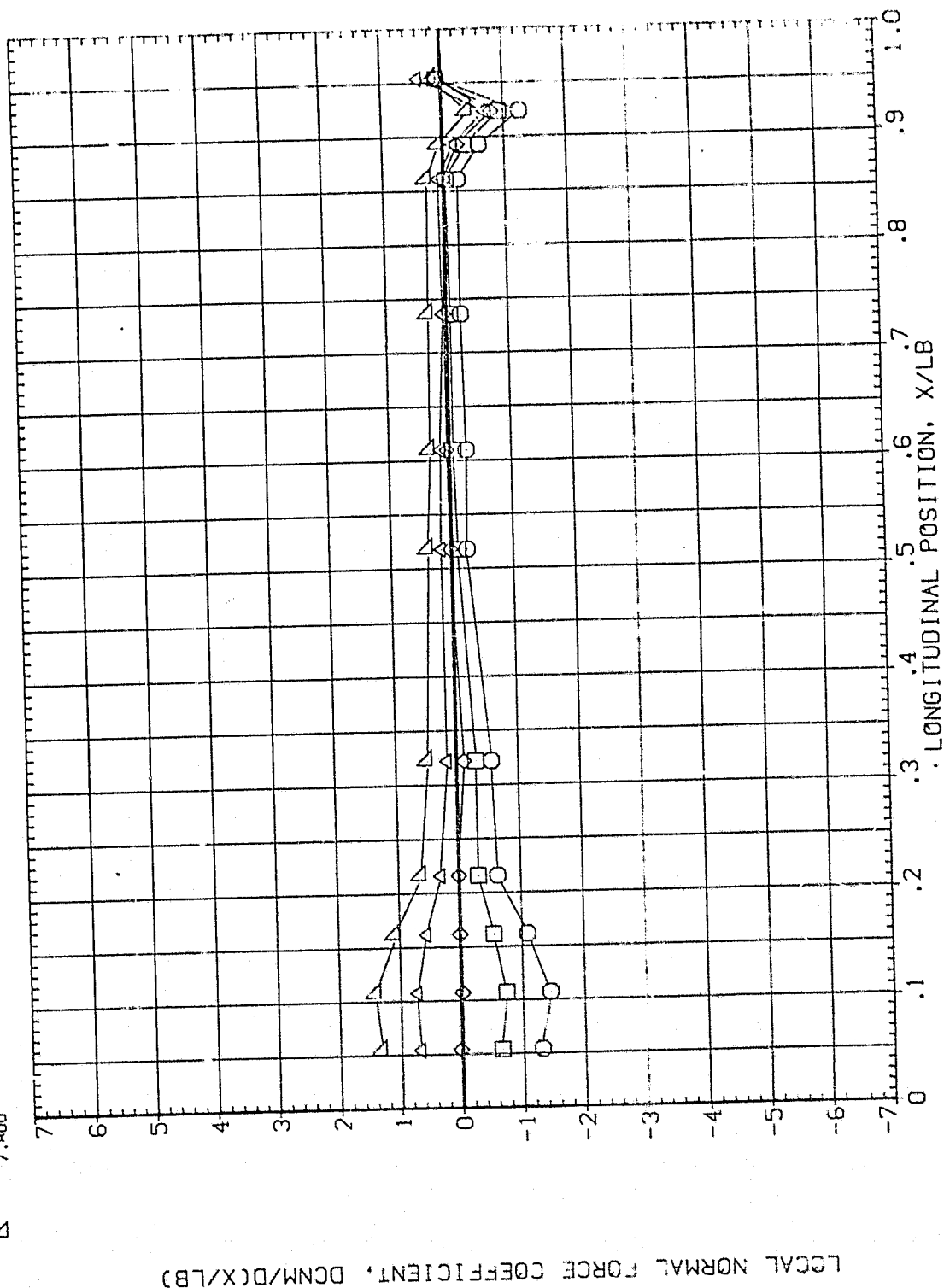


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

[A]MACH = 3.48

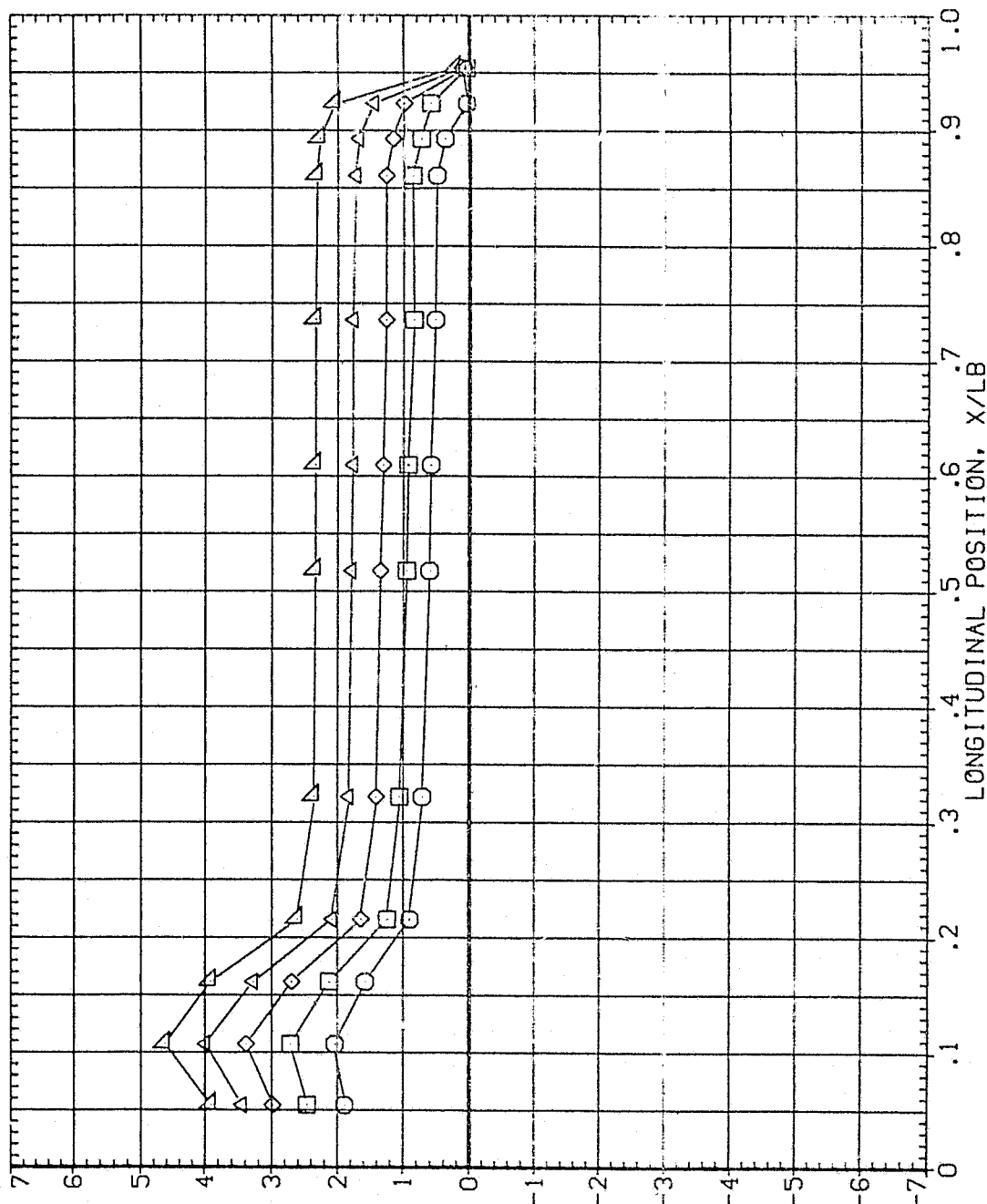
SYMBOL
 ○ □ ◇ △

ALPHA
 12.520
 16.560
 20.610
 24.660
 28.700

BETA
 MOUNT

PARAMETRIC VALUES
 .000 OFFSET 20.000
 1.000 PHI .000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XMRP 1086.4000
 YMRP 400.0000
 ZMRP 400.0000
 SO. FT
 INCHES
 IN. XT
 IN. YT
 IN. ZT
 SCALE .0030



LOCAL NORMAL FORCE COEFFICIENT, DCNM/DCX/LB)

FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

REPRODUCIBILITY OF THE
 ORIGINAL PAGE IS POOR

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (N1A081)

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	PHI	SREF	SG	FT
○	-8.380	.000	.000	572.5550	INCHES	INCHES
◇	-4.330	1.000	45.000	324.0000	INCHES	INCHES
△	-2.280	.000	.000	1086.4000	INCHES	INCHES
▽	3.770	.000	.000	400.0000	INCHES	INCHES
	7.000	.000	.000	SCALE		

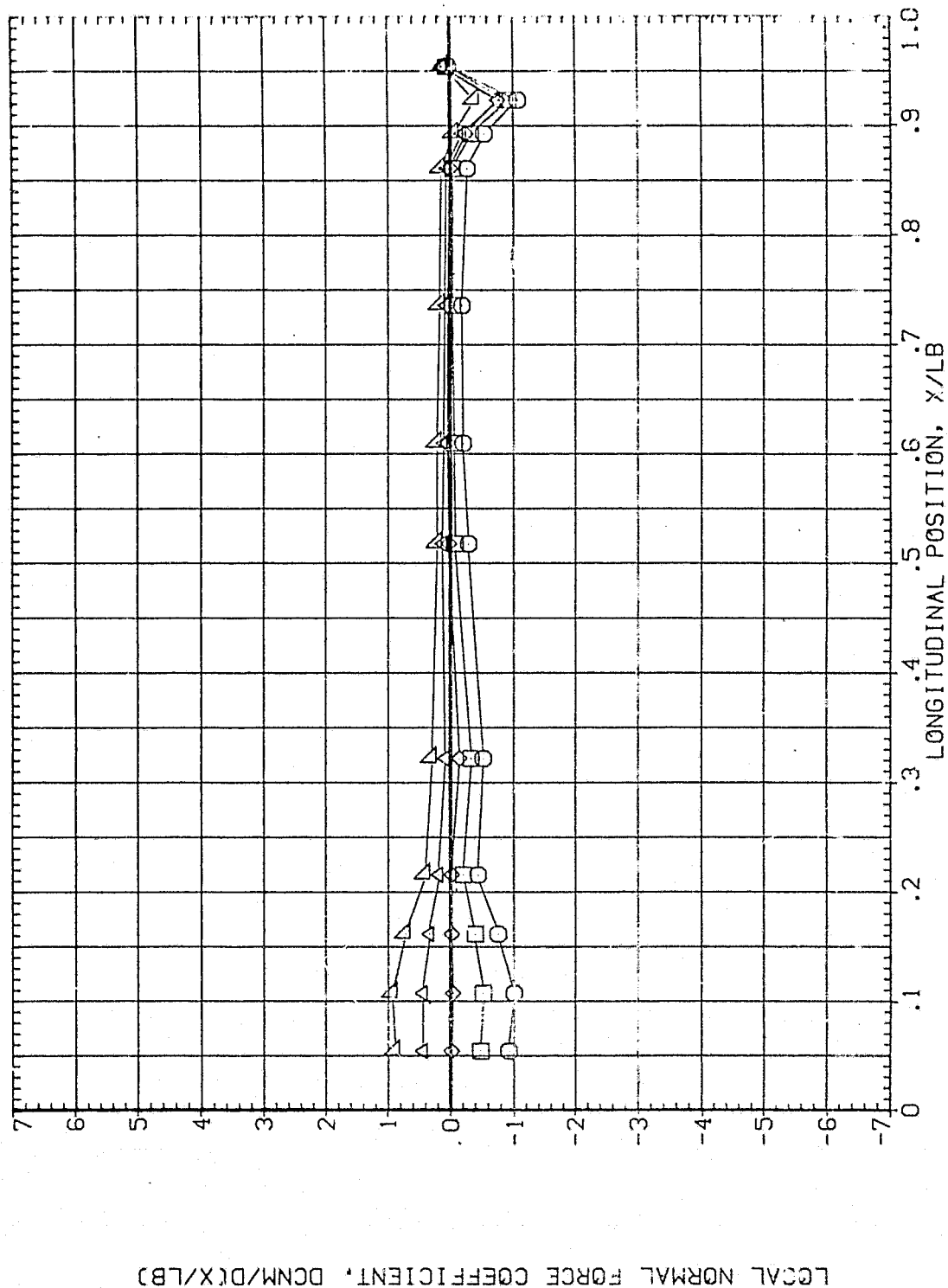


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

SYMBOL ALPHA BETA MOUNT
 12.520
 16.560
 20.610
 24.660
 28.700

PARAMETRIC VALUES
 .000 .000
 .000 .000
 .000 .000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

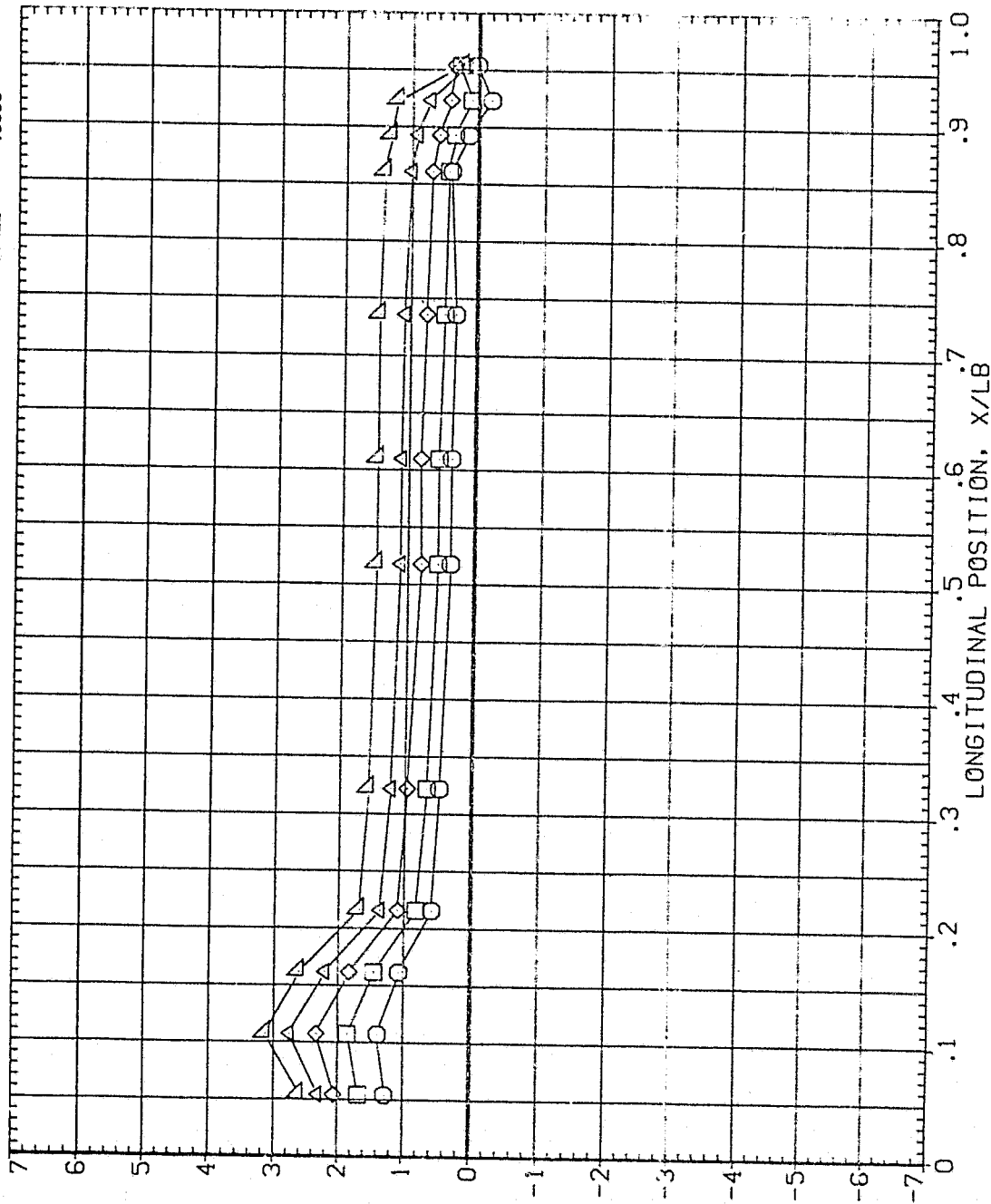


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CA/MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (N1A011)

SYMBOL
 □
 ◇
 △
 ▽

ALPHA
 -8.360
 -4.330
 -.280
 3.770
 7.800

BETA
 MOUNT
 .000
 1.000
 .000
 90.000

PARAMETRIC VALUES
 .000
 PHI
 .000
 90.000

REFERENCE INFORMATION
 SREF 572.5550 SO. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XHRP 1086.4030 IN. XT
 YHRP .0000 IN. YT
 ZHRP 400.0000 IN. ZT
 SCALE .0030

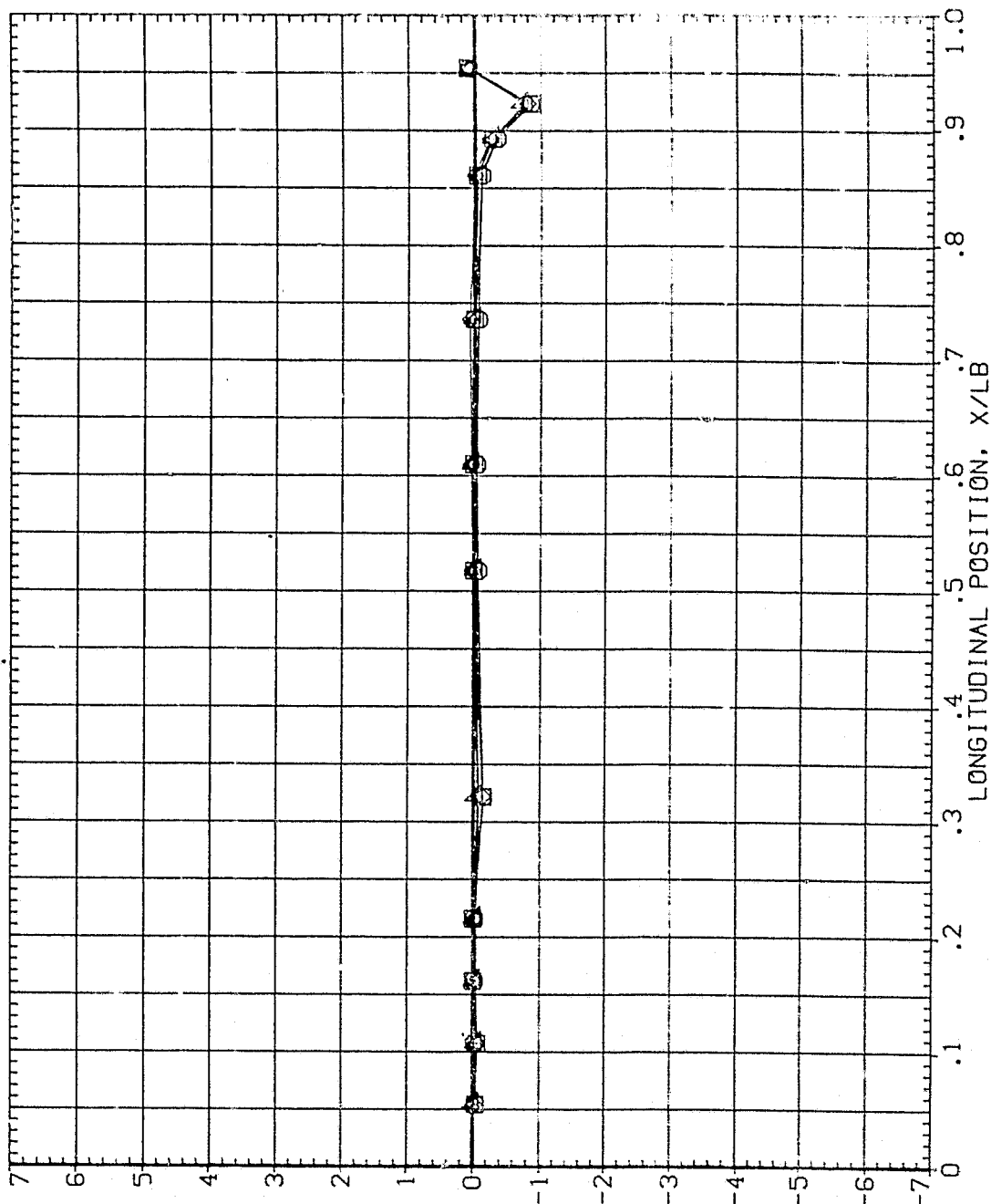


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

SYMBOL ALPHA BETA HOUNT
 O 12.520 16.560 20.610 24.660 28.700
 □ .000 1.000
 ◇ .000 1.000
 △ .000 1.000
 ▽ .000 1.000

PARAMETRIC VALUES
 .000 OFFSET 20.000
 1.000 PHI 90.000

REFERENCE INFORMATION
 SREF 572.5550 SC. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP 400.0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

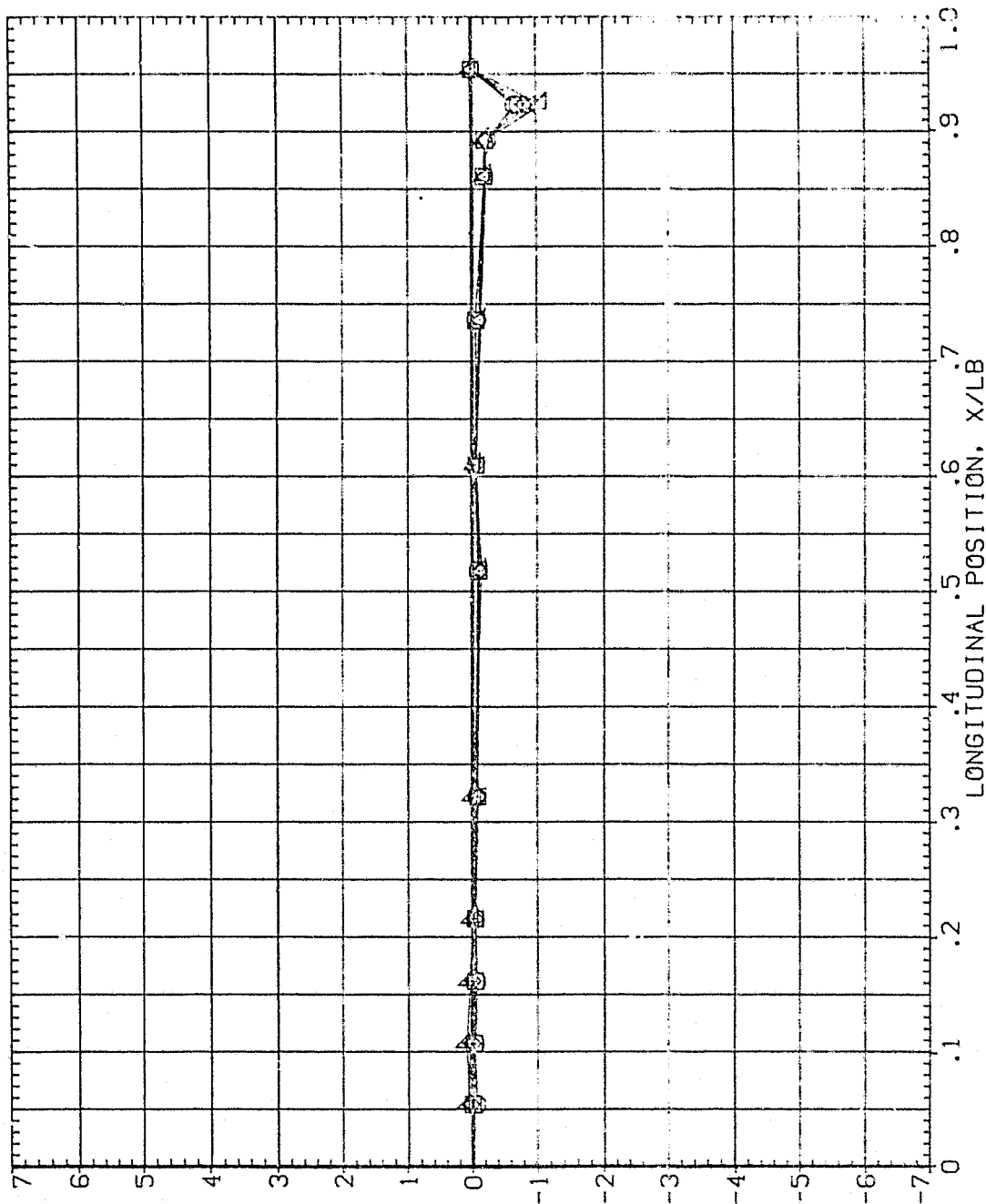


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (N1A021)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	-8.36C	0.000	OFFSET	SREF 572.5550 SO. FT
□	-4.330	1.000	PHI	LREF 324.0000 INCHES
◇	-2.280			BREF 324.0000 IN. XT
△	3.720			XHRP 1086.4000 IN. YI
▽	7.710			YHRP 400.0000 IN. ZI
				ZHRP 400.0000 IN. ZI
				SCALE .003C

LOCAL NORMAL FORCE COEFFICIENT, DCNM/DC(X/LB)

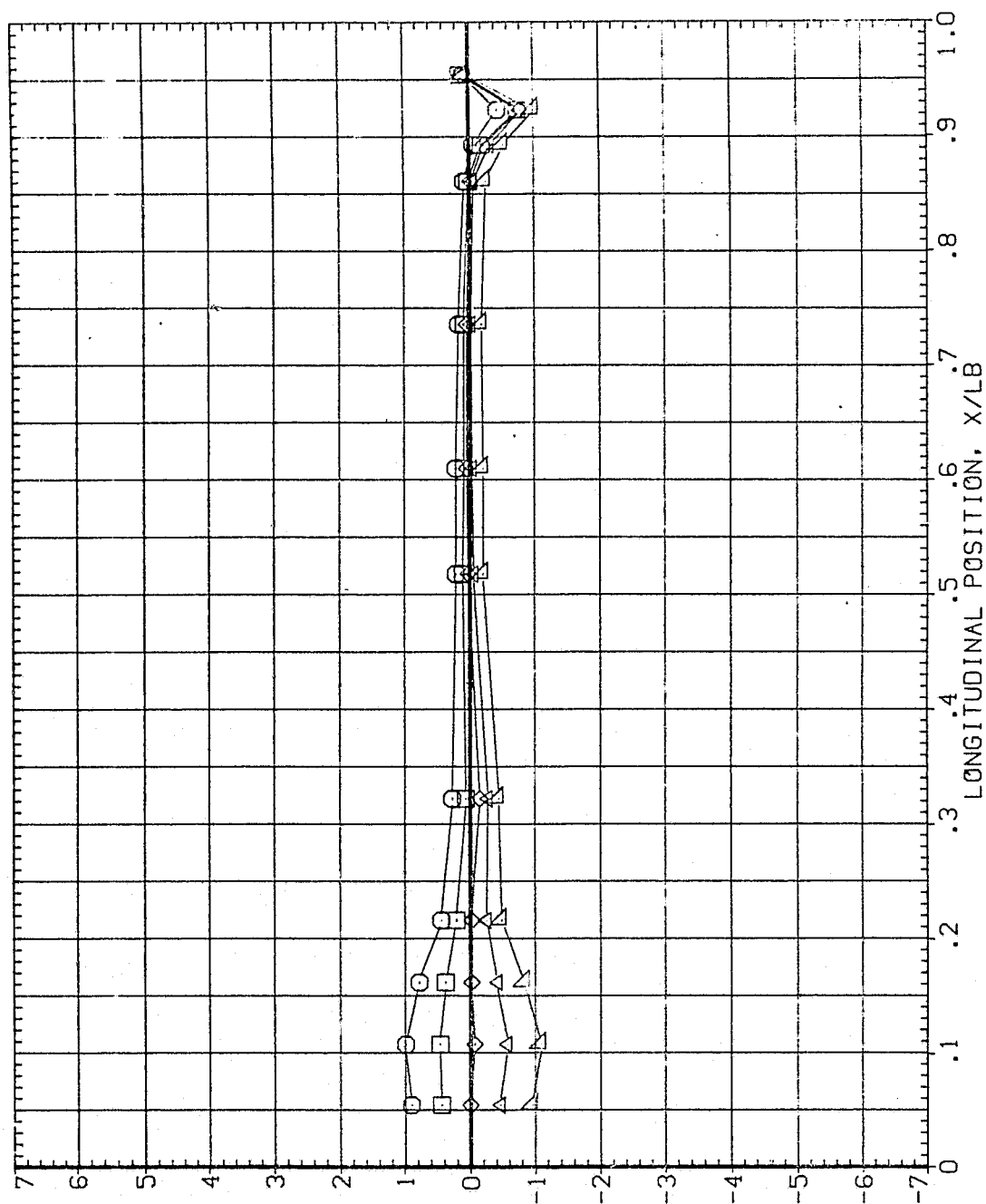


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CA/MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (N1A026)

SYMBOL
○ □ ◇ △

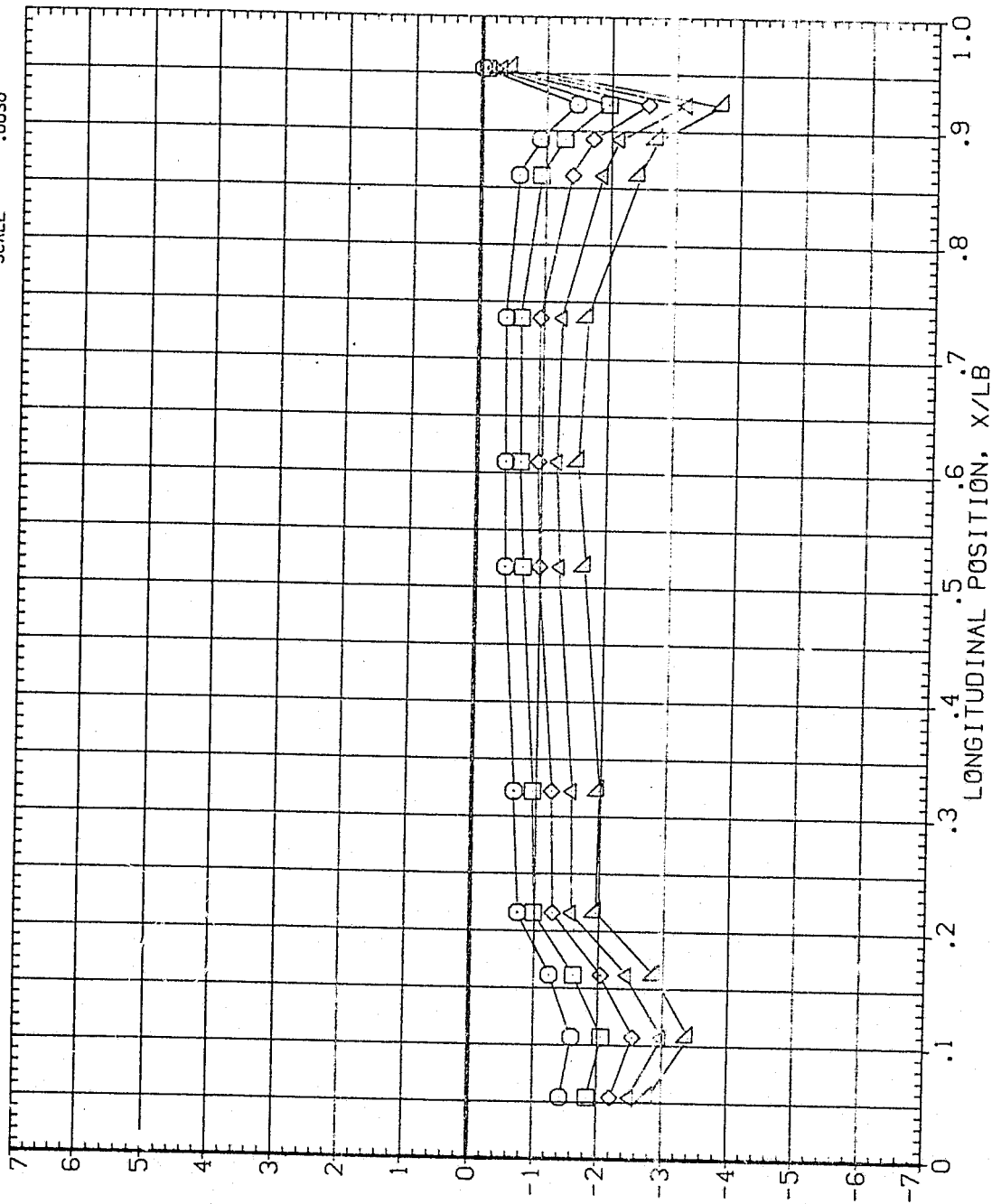
ALPHA
12.520
16.540
20.610
24.660
28.700

BETA
MOUNT
OFFSET
PHI

20.000
135.000

PARAMETRIC VALUES
.000 1.000

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. XT
YMRP .0000 IN. YT
ZMRP 400.0000 IN. ZT
SCALE .0030



LOCAL NORMAL FORCE COEFFICIENT, DCNM/DCX/LB)

FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (N1A031)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	-8.360	MOUNT	.000	SREF 572.5500
□	-1.330	OFFSET	.000	LREF 324.0000
◇	-2.80	PHI	180.000	BREF 324.0000
△	3.770			YMRP 1086.4000
▽	7.000			ZMRP 400.0000
				SCALE .0032

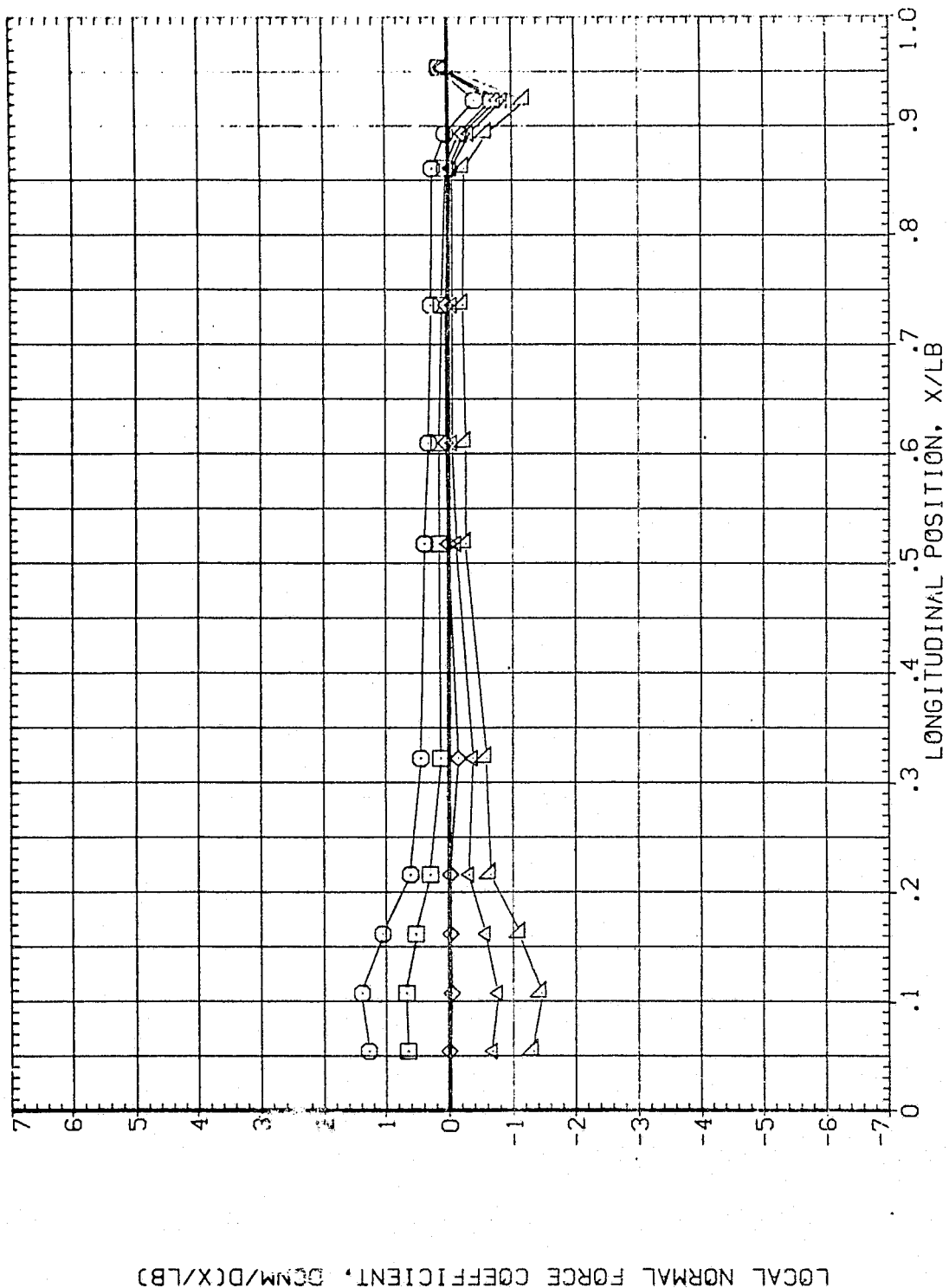


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

$C_{AJMACH} = 3.48$

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	OFFSET	SREF	SO, FT	
○	12.540	0.000	20.000	LREF	324.0000	INCHES
□	16.560	1.000	180.000	BREF	324.0000	INCHES
◇	20.610			XHRP	1086.4000	IN. XT
△	24.660			YHRP	400.0000	IN. YT
▽	28.700			ZHRP	400.0000	IN. ZT
				SCALE	.0030	

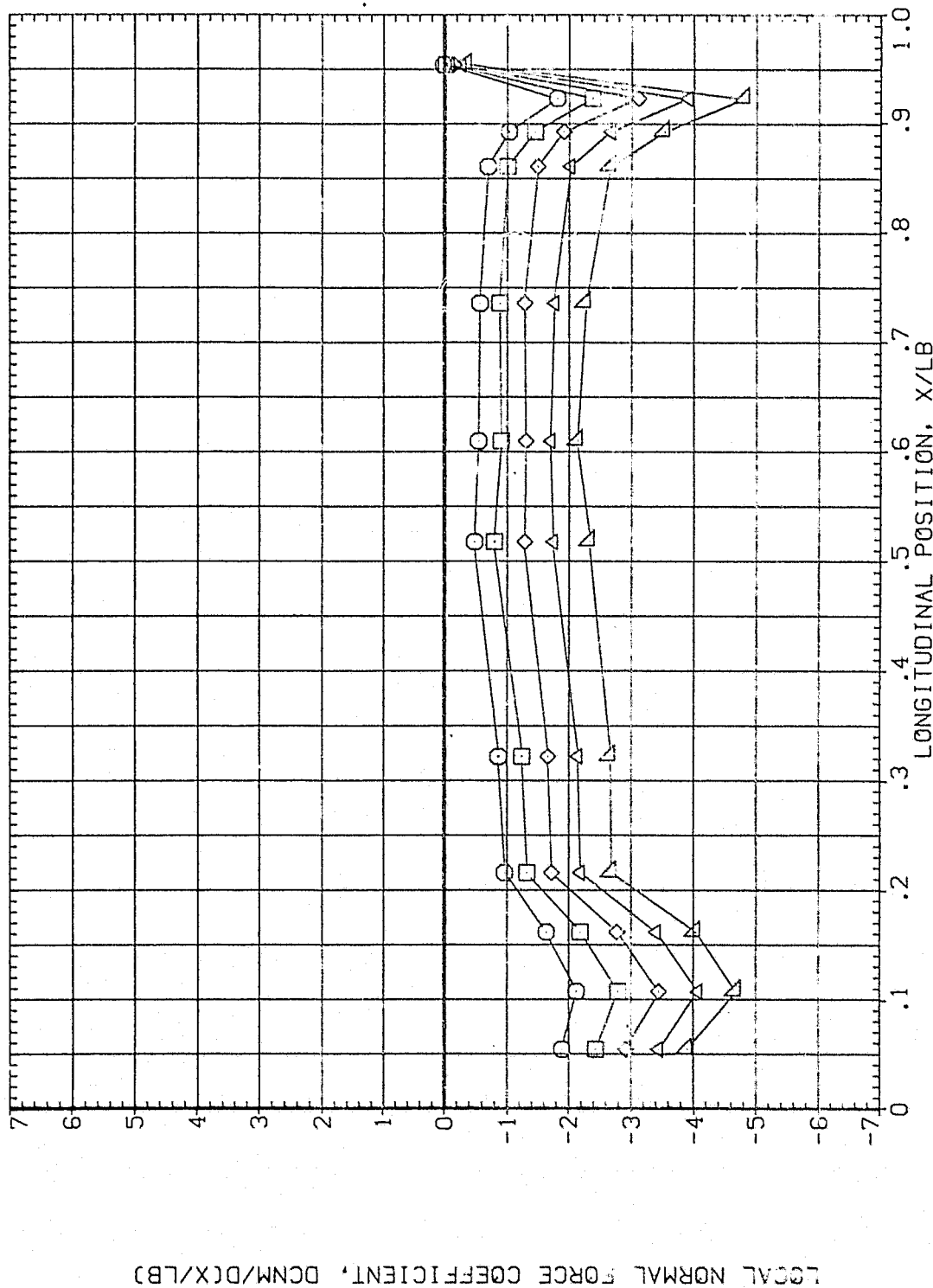


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(M)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (N1A041)

SYMBOL
 ○ □ ◇ △ ▽

ALPHA
 -8.360
 -4.330
 -1.280
 3.770
 7.400

PARAMETRIC VALUES
 .000 .000 .000
 1.000 1.000 1.000
 .000 .000 .000

BETA
 MOUNT

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 YHRP 1086.4000 IN. X
 ZHRP 400.0000 IN. Y
 SCALE .0030

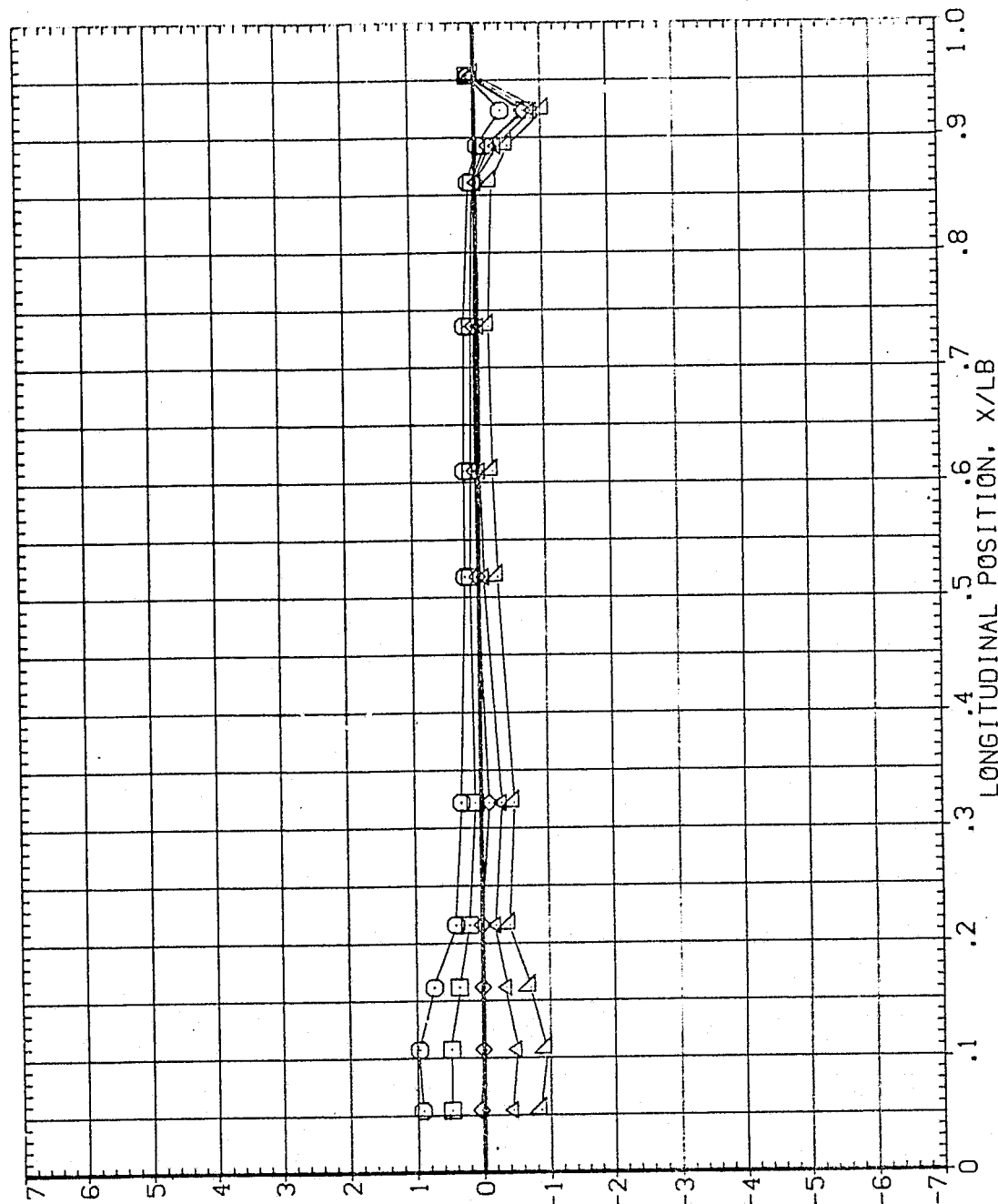


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CAJMACH = 3.48

SYMBOL
○ □ ◇ △

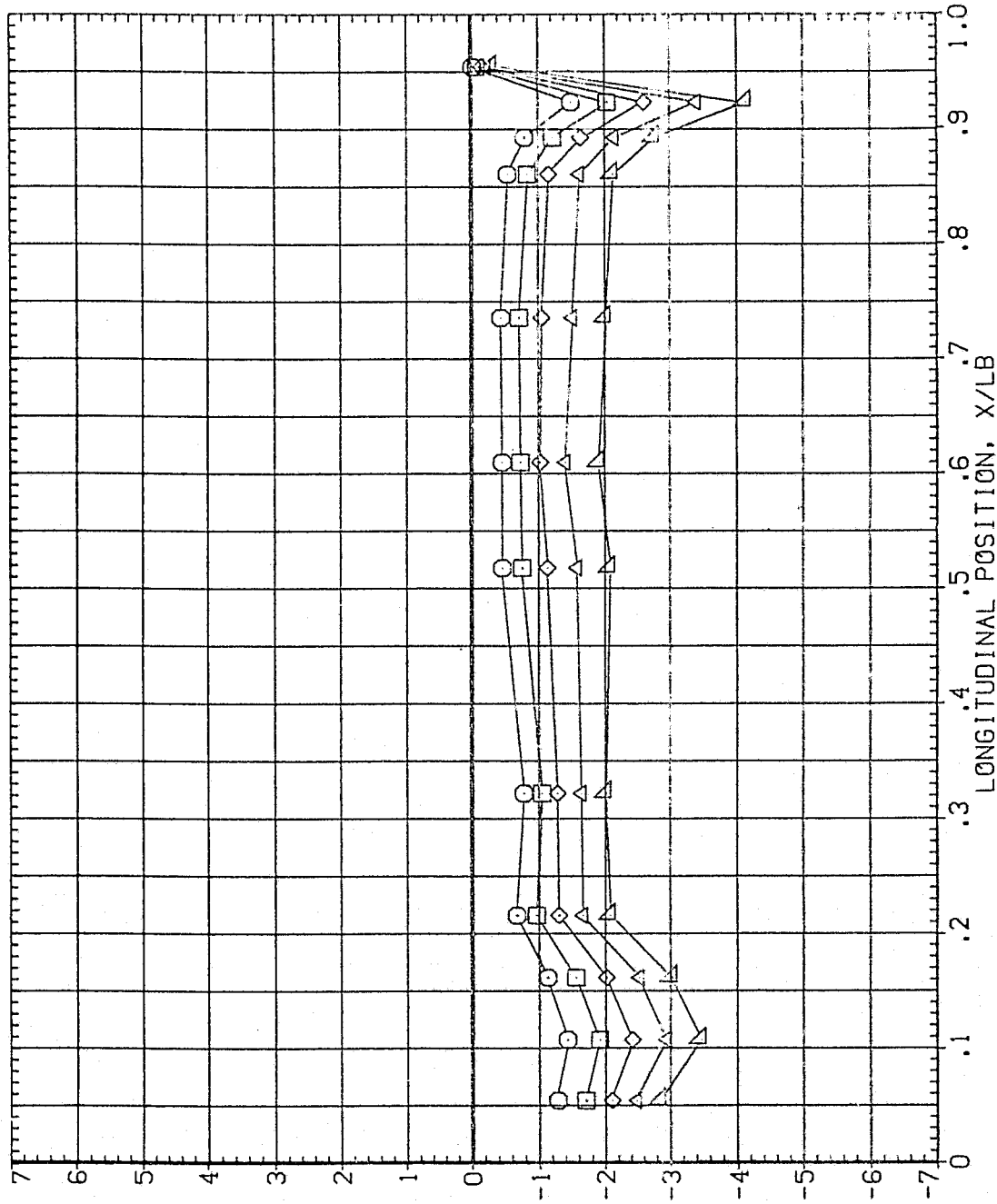
ALPHA
12.520
16.560
20.610
24.660
28.720

BETA
MOUNT

PARAMETRIC VALUES
.000
1.000
PHI

OFFSET
20.000
225.000

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. XT
YMRP .0000 IN. YT
ZMRP 400.0000 IN. ZT
SCALE .0030



LOCAL NORMAL FORCE COEFFICIENT, DCNM/DC(X/LB)

FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(M)MACH = 3.48

REPRODUCTION OF THE
ORIGINAL FILE IS FOR

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (N1A051)

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	OFFSET	SREF	572.5550	50. FT
○	-8.360	0.000	0.000	LREF	324.0000	INCHES
□	-4.330	1.000	270.000	BREF	324.0000	INCHES
◇	-2.280			XMRP	1086.4000	N. XT
△	3.790			YMRP	.0000	N. Y
▽	7.400			ZMRP	400.0000	N. Z
				SCALE	.0030	

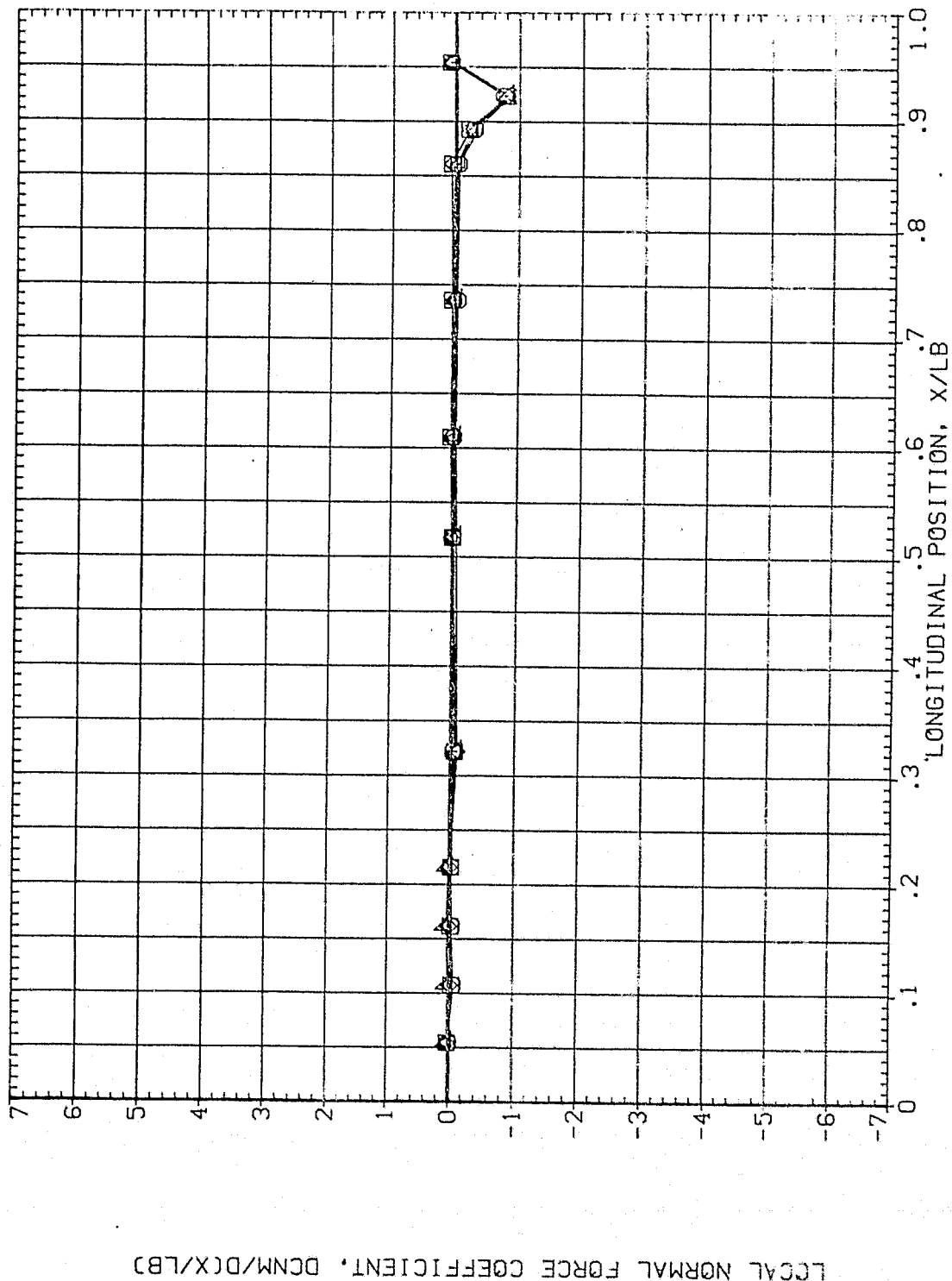


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CA/MACH = 3.48

SYMBOL
 ○
 □
 ◇
 △
 ▽

ALPHA
 12.520
 16.540
 20.610
 24.680
 28.700

BETA
 .000
 1.000
 .000
 .000
 .000

PARAMETRIC VALUES
 OFFSET
 PHI
 20.000
 270.000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

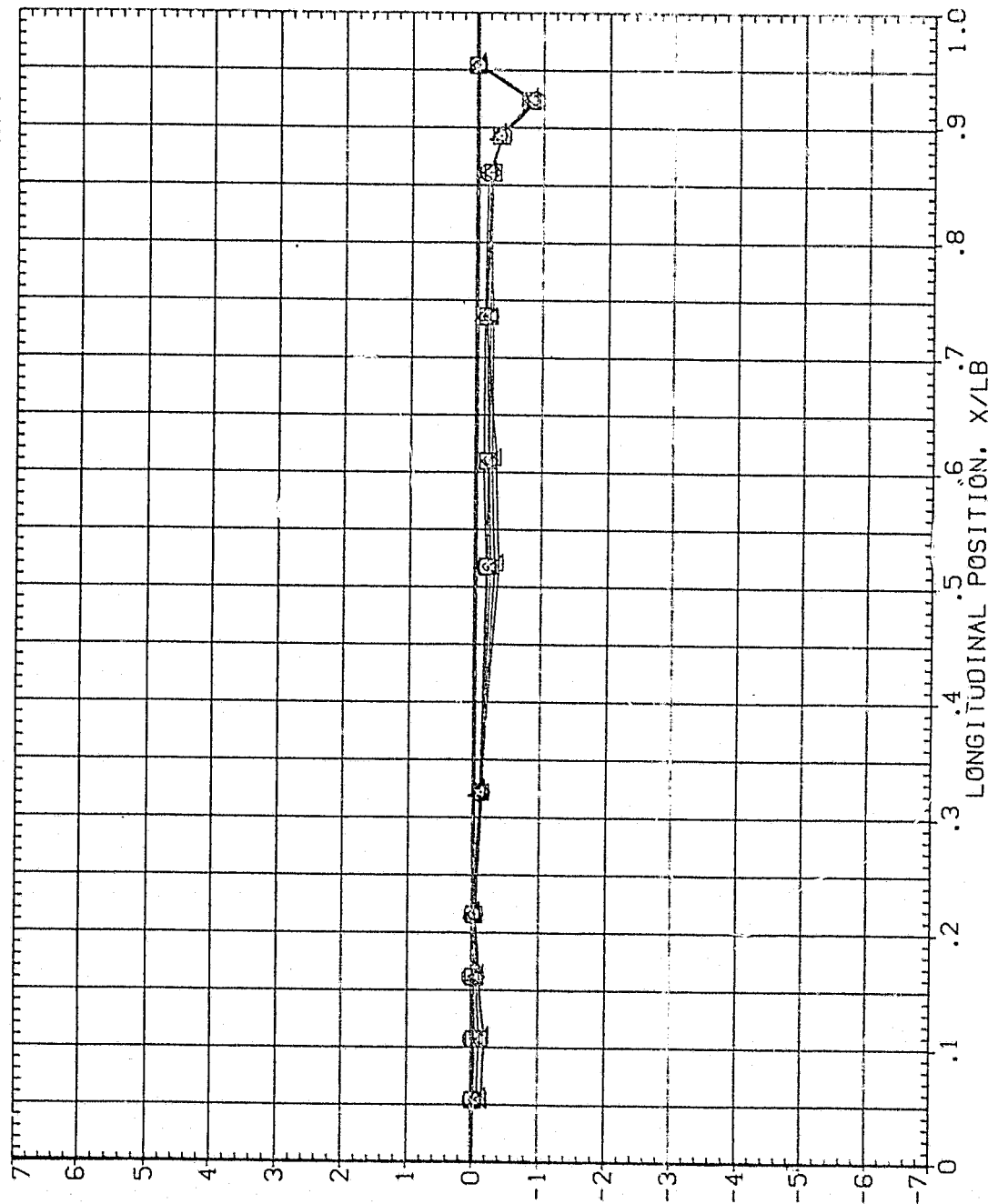
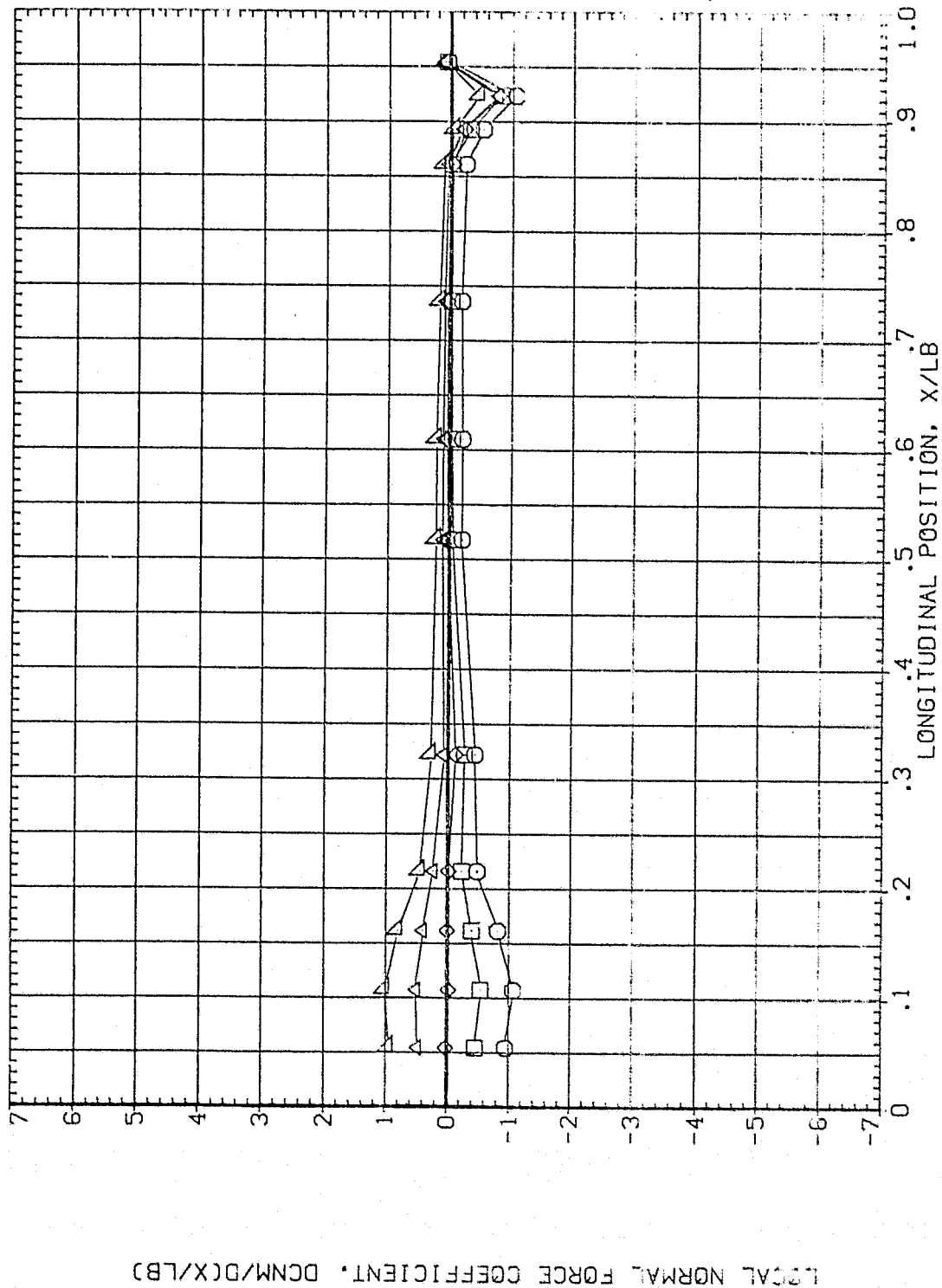


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (N1A091)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	-8.360	0.000	OFFSET .000	SREF 572.5550 SQ. FT
□	-4.330	1.000	PHI 315.000	LREF 324.0000 INCHES
◇	-2.280			BREF 324.0000 INCHES
△	3.770			XHRP 1086.4000 IN. XT
▽	7.800			YHRP 400.0000 IN. YT
				ZHRP 400.0000 IN. ZT
				SCALE .0030



(N1A096)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1

SYMBOL
○
□
◇
△

ALPHA
12.500
16.560
20.610
24.660
28.700

BETA
HOUNT

PARAMETRIC VALUES
.000 OFFSET 20.000
1.000 PHI 315.000

REFERENCE INFORMATION
SREF 572.5550
LREF 324.0000
BREF 324.0000
XHRP 1086.4000
YHRP .0000
ZHRP 400.0000
SCALE .0030

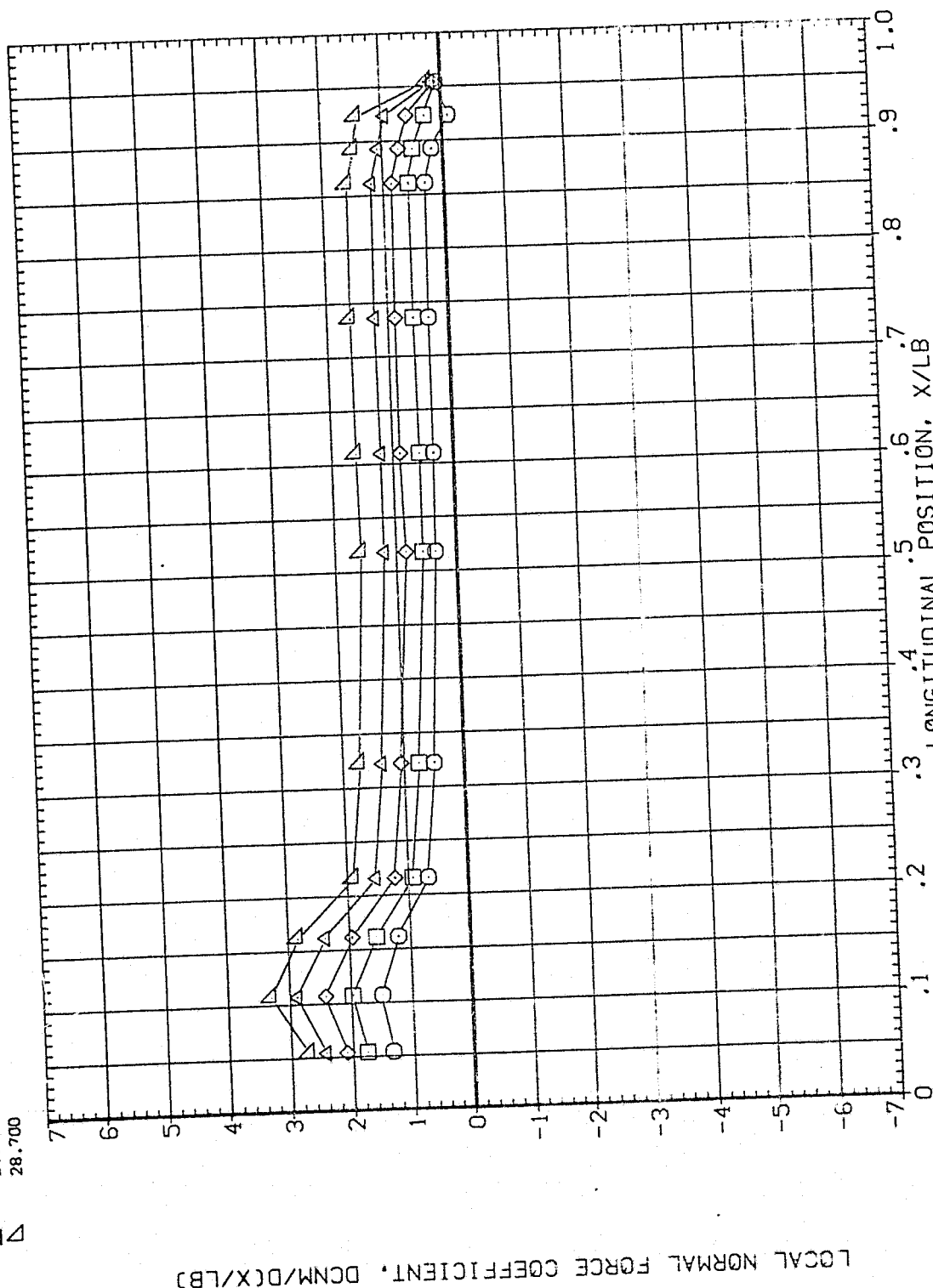


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (M1AX01)

SYMBOL

ALPHA
-8.310
-4.290
-2.280
3.730
7.750

PARAMETRIC VALUES
.000 OFFSET
1.000 PHI

BETA
MOUNT
.000
.000

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XHRP 1086.4000 IN. XT
YHRP .0000 IN. YT
ZHRP 400.0000 IN. ZT
SCALE .0030

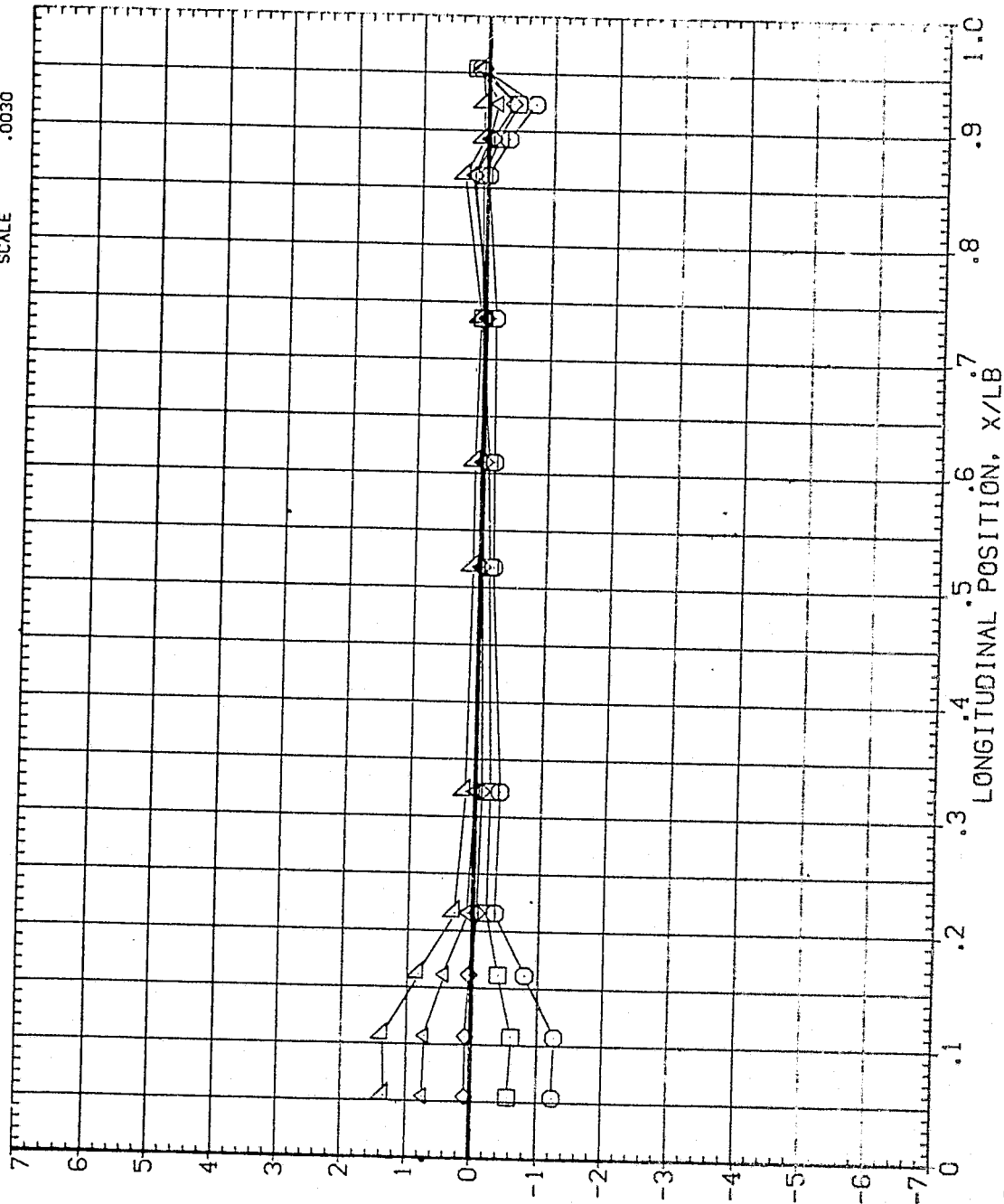


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(MACH = 4.95)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (M1AX06)

SYMBOL	PARAMETRIC VALUES				REFERENCE INFORMATION			
	ALPHA	BETA	.000	OFFSET	SREF	572.5550	SC. FT	
○	12.450	MOUNT	1.000	PHI	LREF	324.0000	INCHES	
□	15.470				BREF	324.0000	INCHES	
◇	20.490				XMRP	1086.4000	IN. XT	
△	24.510				YMRP	.0000	IN. YI	
▽	28.540				ZMRP	400.0000	IN. ZI	
					SCALE	.0030		

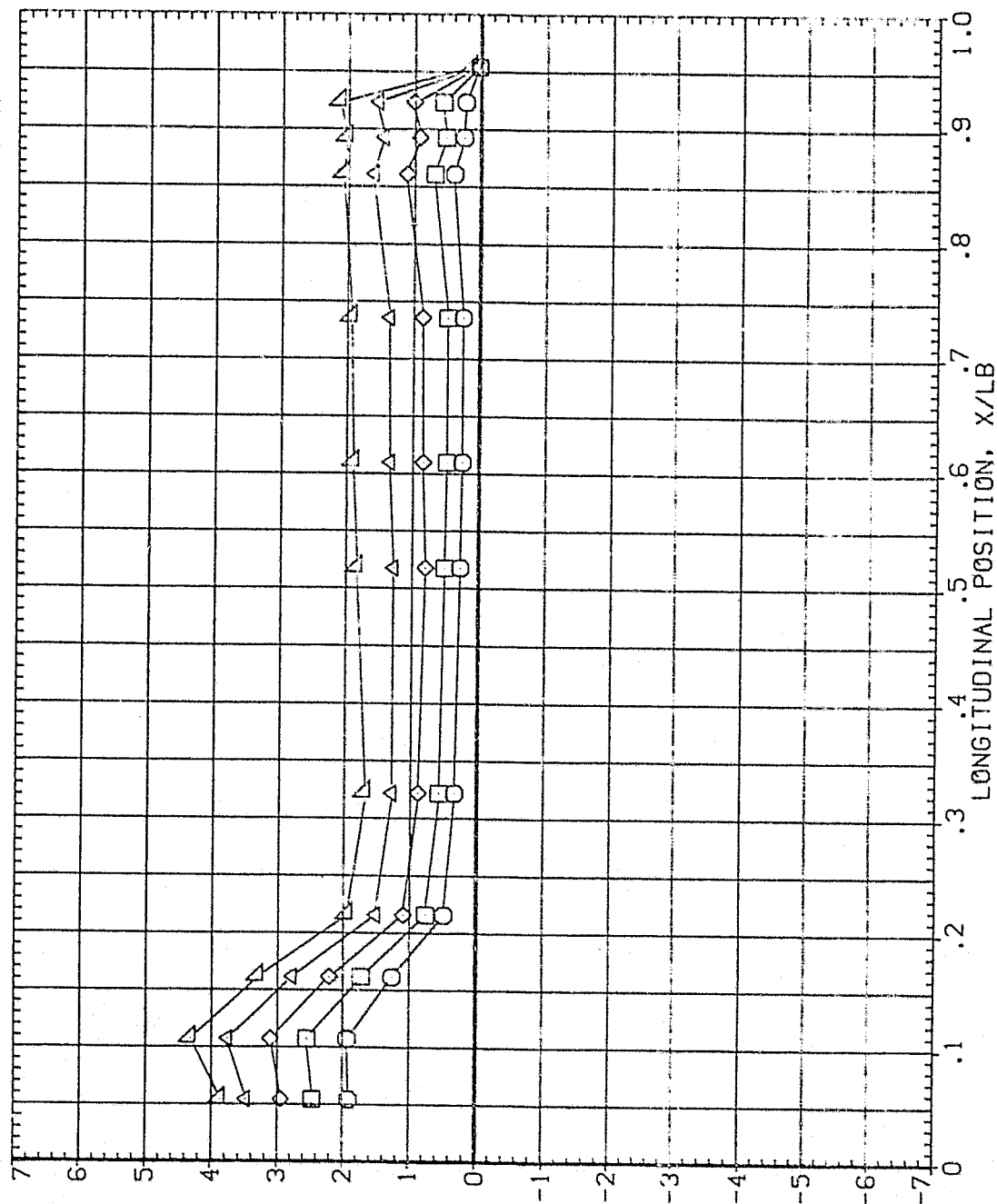


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

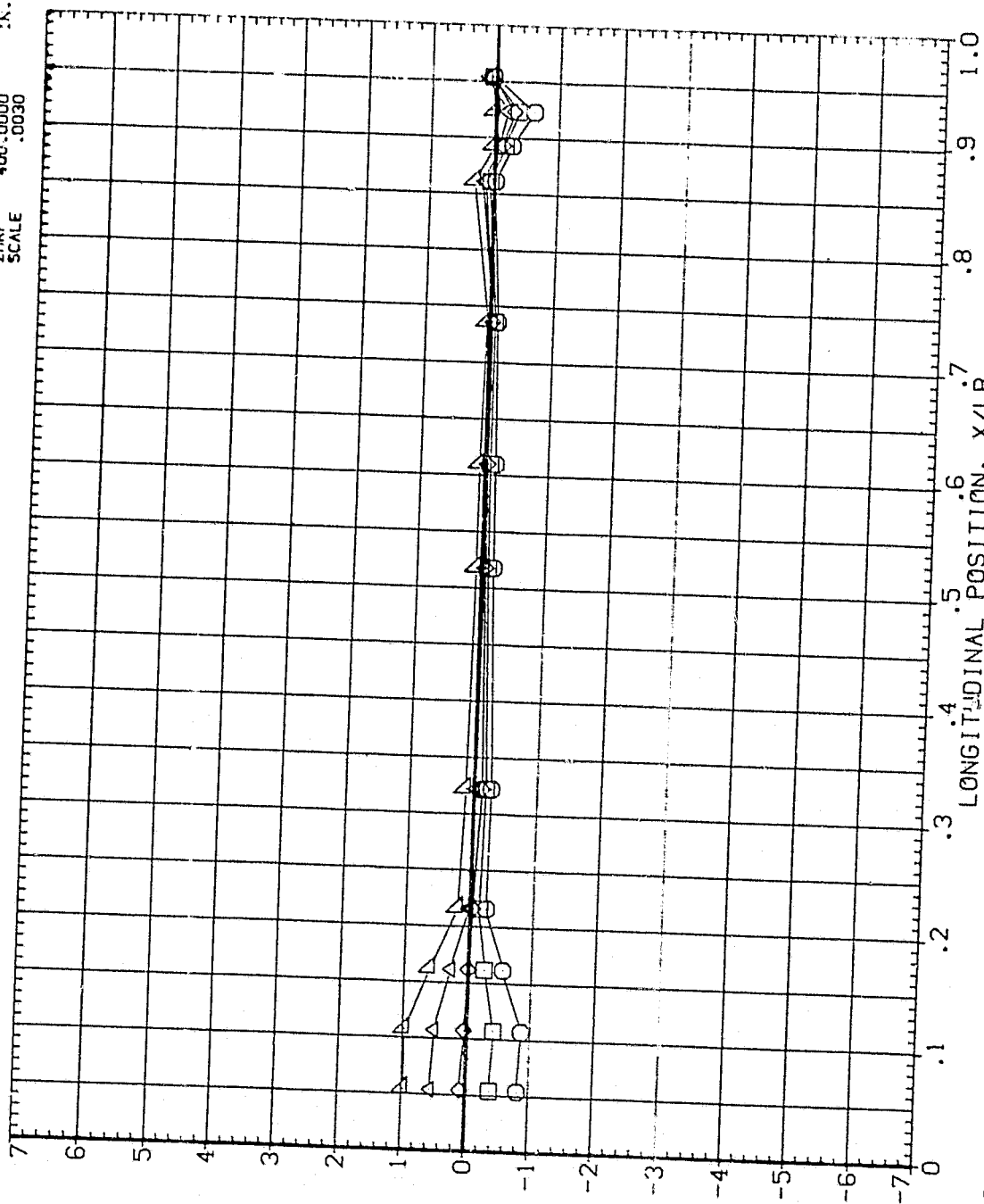
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (M1AX81)

SYMBOL

ALPHA
-8.330
-4.290
-2.280
3.730
7.750

PARAMETRIC VALUES
BETA
HOUNT
1.000
1.000
PHI
OFFSET
45.000
PHI
45.000

REFERENCE INFORMATION
SREF 572.5530
LREF 324.0000
BREF 324.0000
XMRP 1086.4000
YMRP .0000
ZMRP 400.0000
SCALE .0030



SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	OFFSET	SREF	SO. FT	
□	12.450	0.000	PHI	LREF	324.0000	INCHES
◇	16.470	1.000	PHI	BREF	324.0000	INCHES
△	20.490			XMRP	1086.4000	IN. YI
▽	24.510			YMRP	400.0000	IN. ZI
△	28.540			ZMRP	400.0000	IN. ZI
				SCALE	.0030	

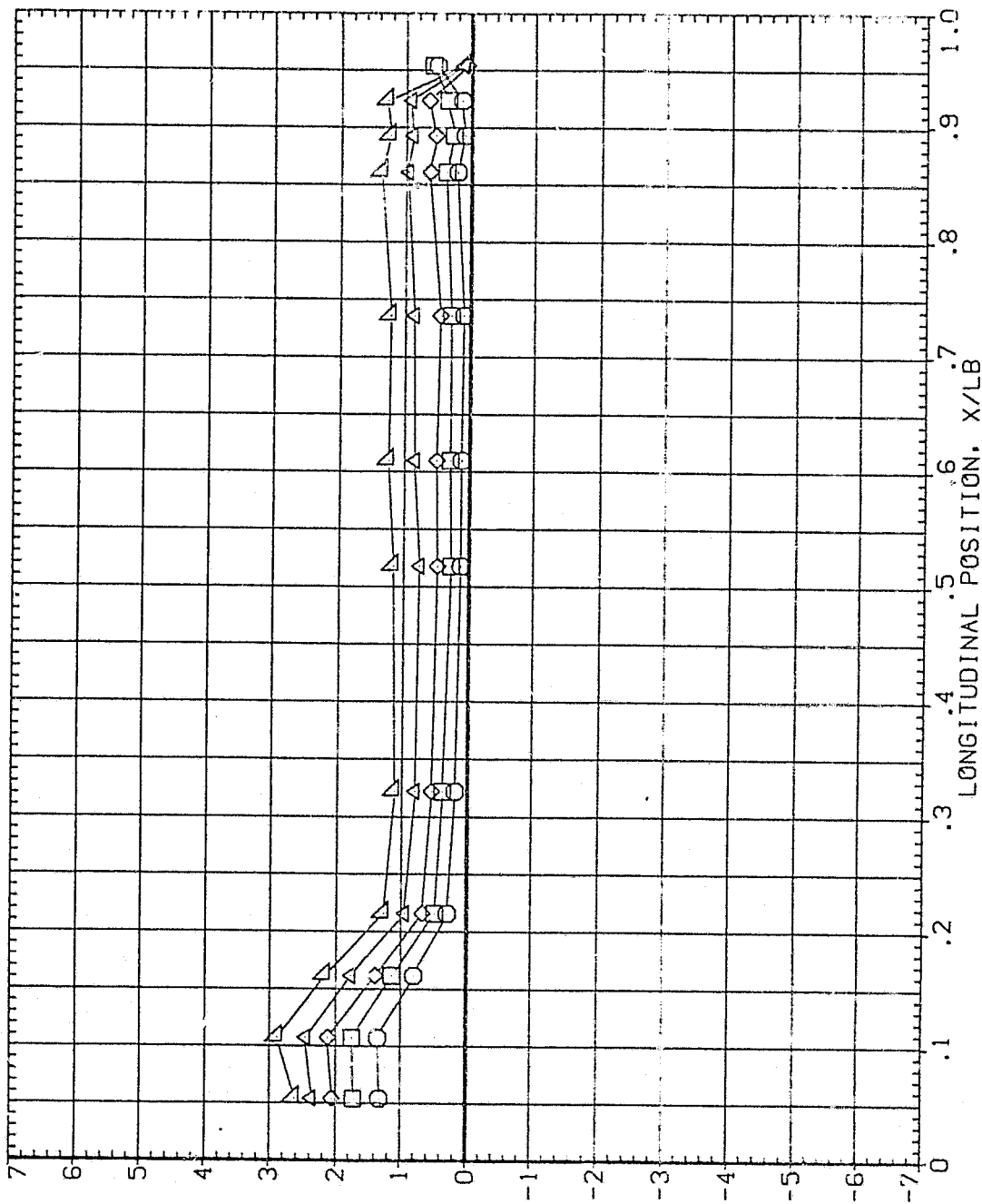


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(M)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (M1AX11)

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	OFFSET	SREF	LREF	BREF
□	-8.310	.000	.000	572.5550	324.0000	324.0000
◇	-4.290	1.000	PHI	1086.4000	400.0000	400.0000
△	-2.280					
▽	3.730					
▽	7.750					

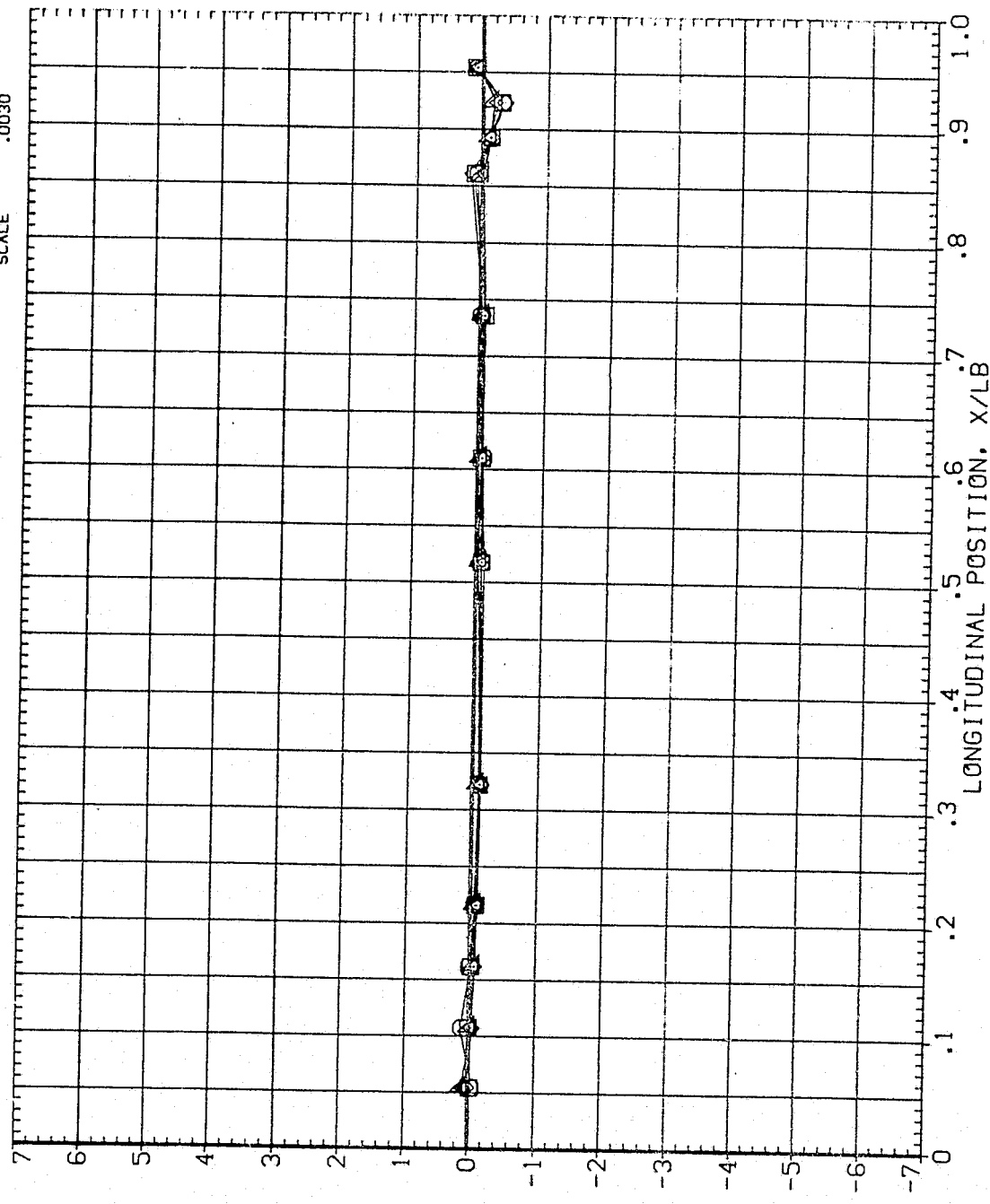
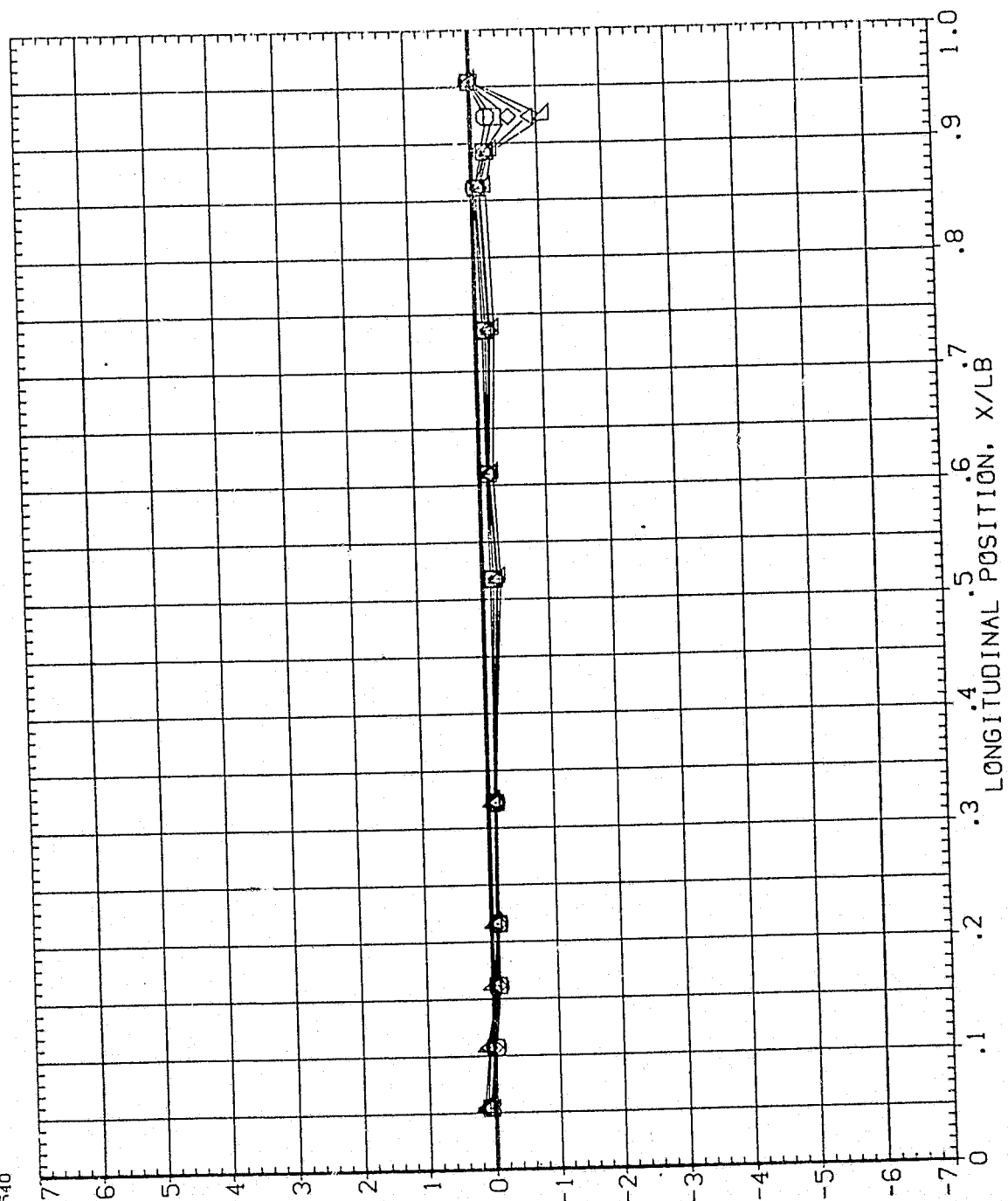


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES
(A)MACH = 4.96

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. XT
YMRP .0000 IN. YT
ZMRP 400.0000 IN. ZT
SCALE .0030

PARAMETRIC VALUES
ALPHA 12.450
BETA 20.000
MOUNT 90.000
PHI .000
OFFSET 1.000

SYMBOL
□
◇
△
▽



LOCAL NORMAL FORCE COEFFICIENT, DCNM/DC(X/LB)

FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (M1AX21)

SYMBOL

ALPHA
-8.310
-4.280
-.280
3.730
7.750

PARAMETRIC VALUES
.000 OFFSET
1.000 PHI

.000
135.000

REFERENCE INFORMATION
SREF 572.5550
LREF 324.0000
BREF 324.0000
XMRP 1386.4000
YMRP .0000
ZMRP 400.0000
SCALE .0030

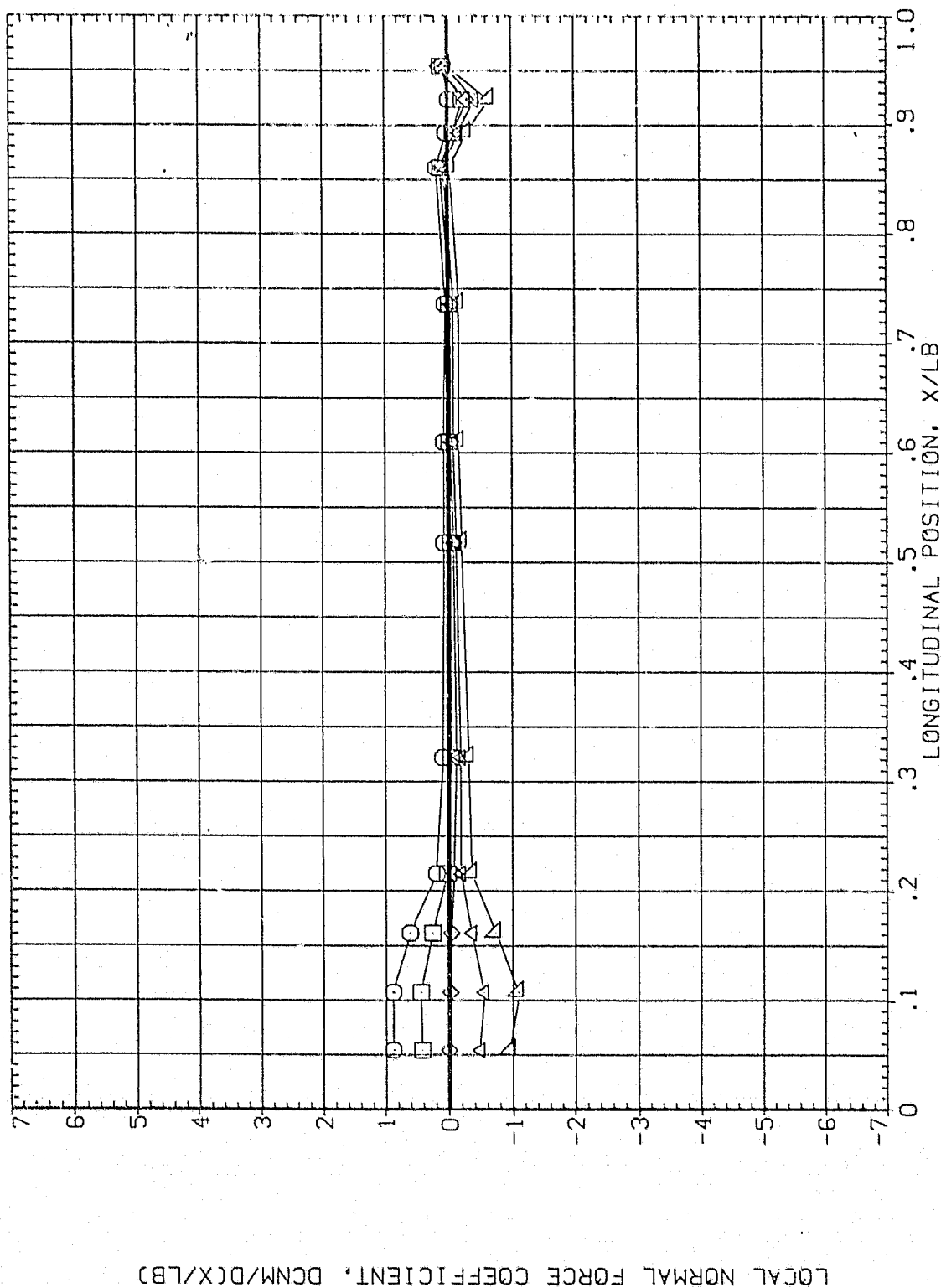


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

SYMBOL
 ○
 □
 ◇
 △

ALPHA
 12.450
 16.450
 20.490
 24.510
 28.510

BETA
 HOUNT
 1.000
 1.000
 1.000
 1.000

PARAMETER
 .000
 .000
 .000
 .000

PHI
 20.000
 135.000

REFERENCE INFORMATION
 SREF 572.5950 50. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. X1
 YMRP .0000 IN. Y1
 ZMRP 400.0000 IN. Z1
 SCALE .0030

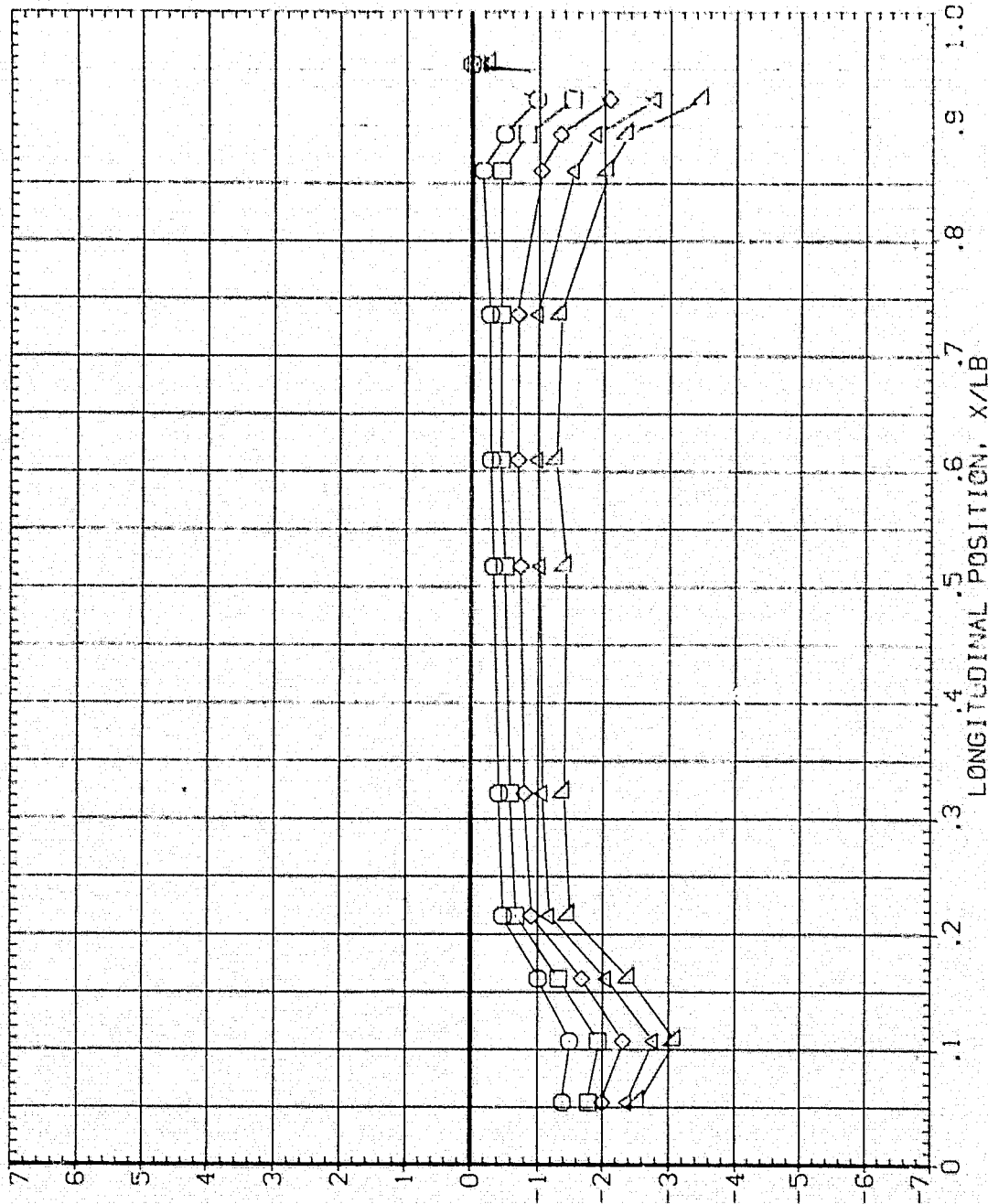


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CAOMACH = 4.96

REPRODUCED FROM THE
 ORIGINAL DATA

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (M1AX31)

SYMBOL

ALPHA
-8.290
-4.290
-2.280
3.730
7.750

BETA
MOUNT

PARAMETRIC VALUES
.000
1.000
OFFSET
PHI

.000
180.000

REFERENCE INFORMATION
SREF 572.5550
LREF 324.0000
BREF 324.0000
XMRP 1086.4000
YMRP .0000
ZMRP 400.0000
SCALE .0030

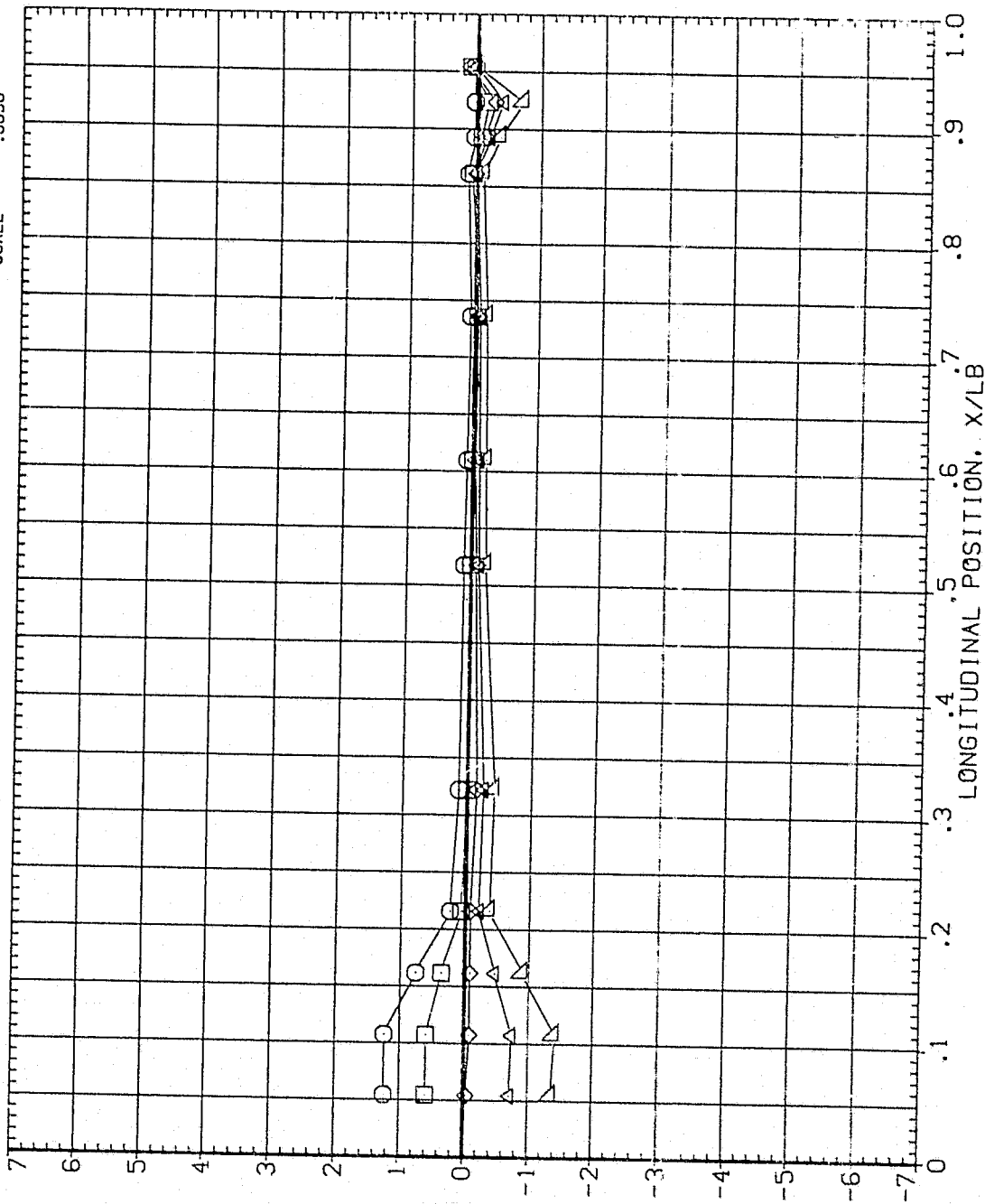


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES
CA/MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (M1AX36)

SYMBOL
○ □ ◇ △ ▽

ALPHA
12.450
16.470
20.490
24.510
28.560

PARAMETRIC VALUES
BETA .000
HOUNT 1.000
OFFSET PHI 20.000
180.000

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XHRP 1086.4000 IN. X1
YHRP 400.0000 IN. Y1
ZHRP 400.0000 IN. Z1
SCALE .0030

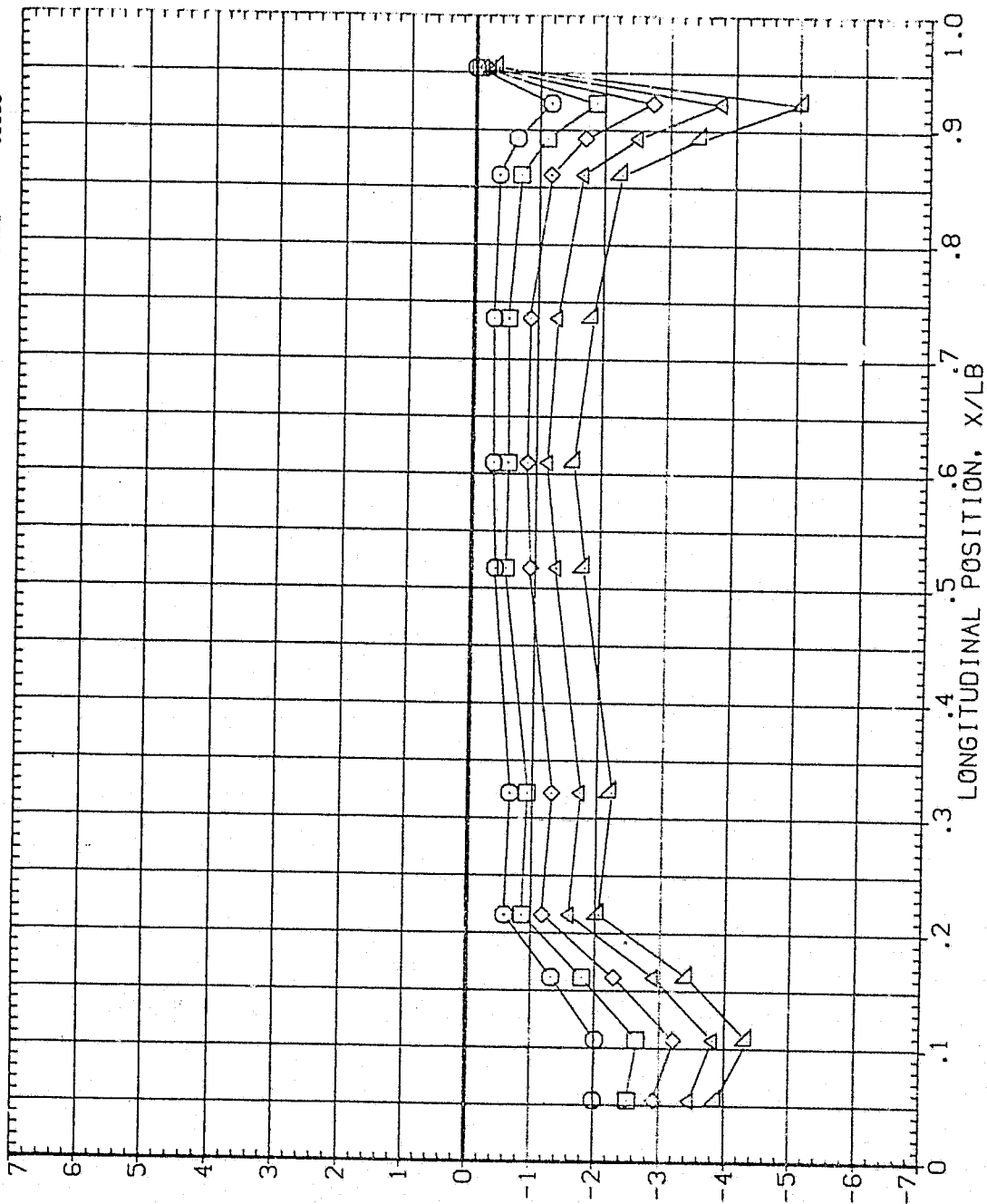


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (M1AX41)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	-8.310	0.000	OFFSET	SREF 572.5550
□	-4.290	1.000	PHI	LREF 324.0000
◇	-1.280	225.000		BREF 324.0000
△	3.730			XMRP 1086.4000
▽	7.750			YMRP .0000
				ZMRP 400.0000
				SCALE .0030
				SD. FT
				INCHES
				IN. X
				IN. Y
				IN. Z

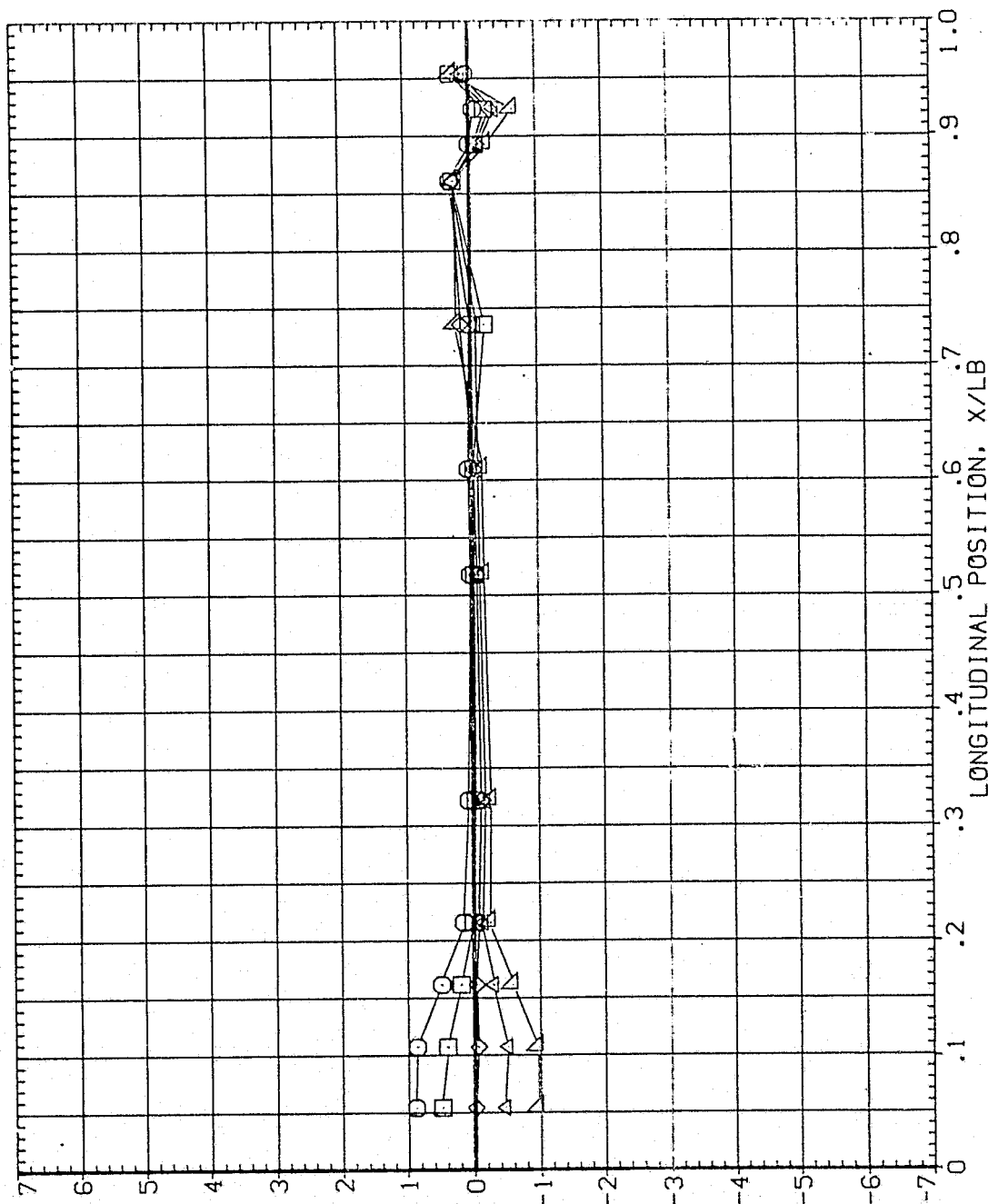


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (M1AX46)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	12.450	0.000	OFFSET 20.000	SREF 572.5550
□	16.450	1.000	PHI 225.000	LREF 324.0000
◇	20.490			BREF 324.0000
△	24.510			XMRP 1086.4000
▽	28.540			YMRP .0000
				ZMRP 400.0000
				SCALE .0030

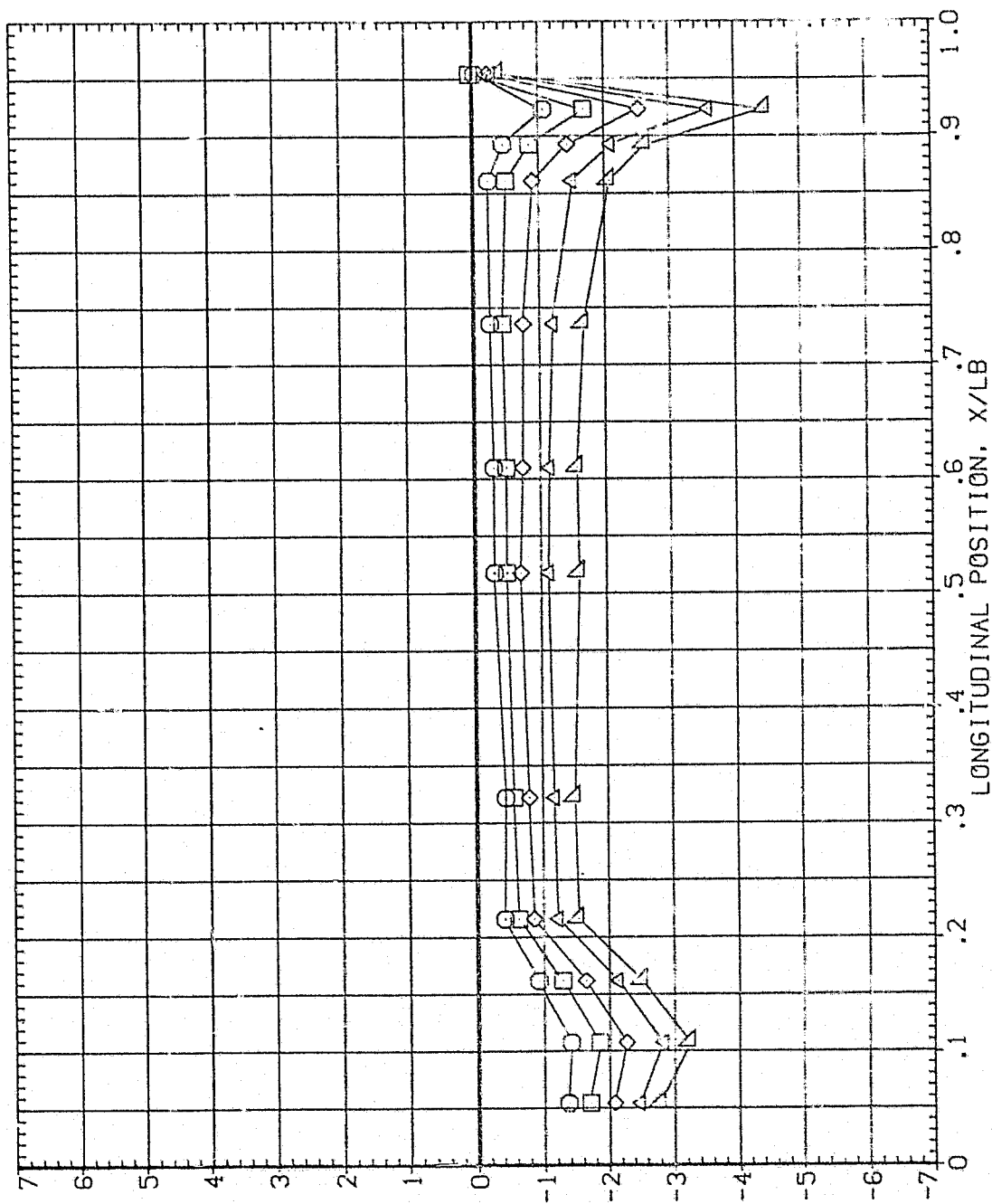


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CA/MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (M1AX51)

SYMBOL
 ○
 □
 ◇
 △

ALPHA
 -8.310
 -4.290
 -.280
 3.750
 7.750

BETA
 MOUNT

PARAMETRIC VALUES
 .000 GFFSET .000
 1.000 PHI 270.000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

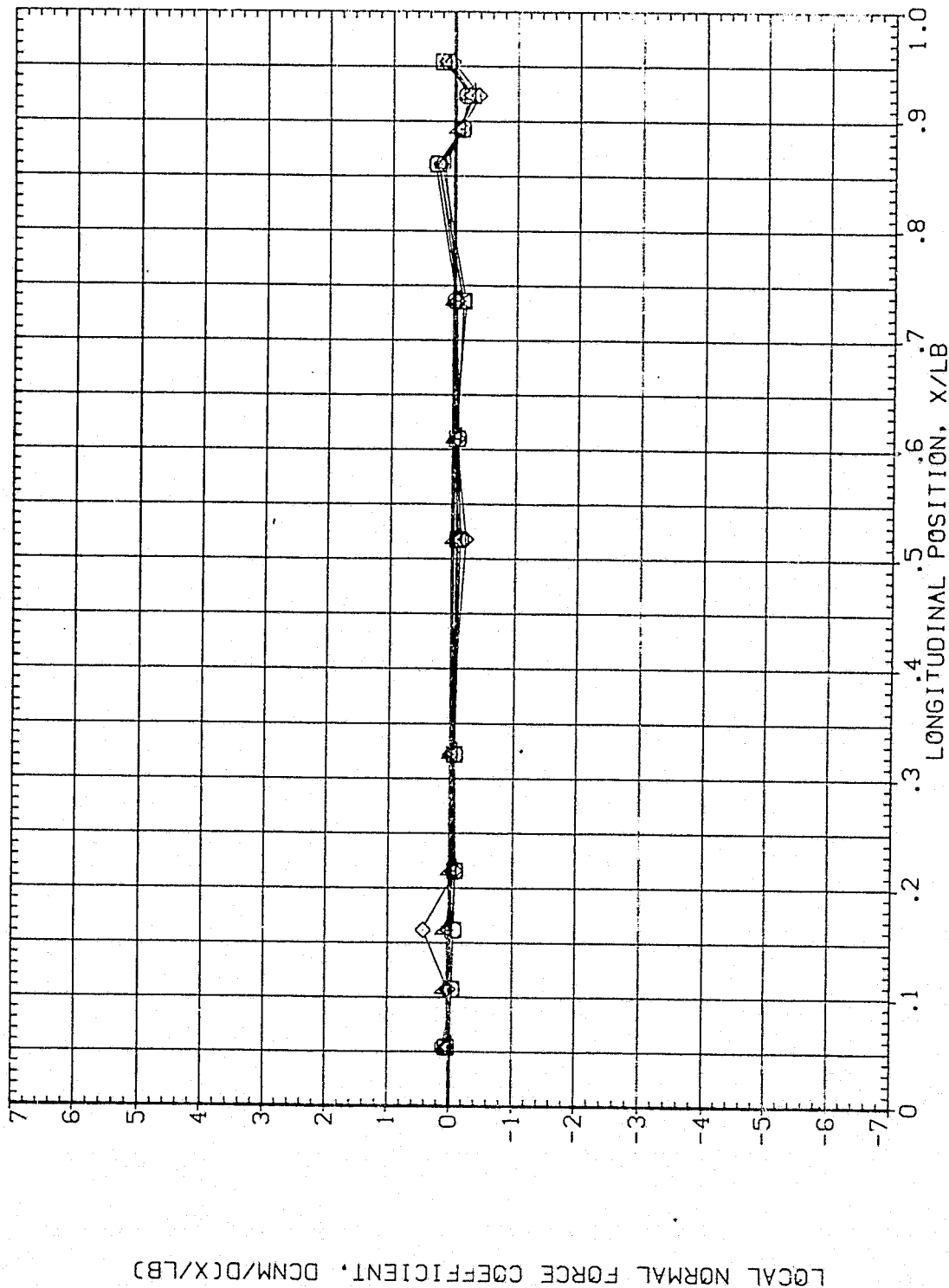


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CA/MACH = 4.96

PARAMETRIC VALUES			REFERENCE INFORMATION		
ALPHA	BETA	PHI	SREF	LREF	BREF
12.450	16.450	20.490	572.5550	324.0000	324.0000
24.530	28.540		1086.4000	400.0000	400.0000
			SCALE		

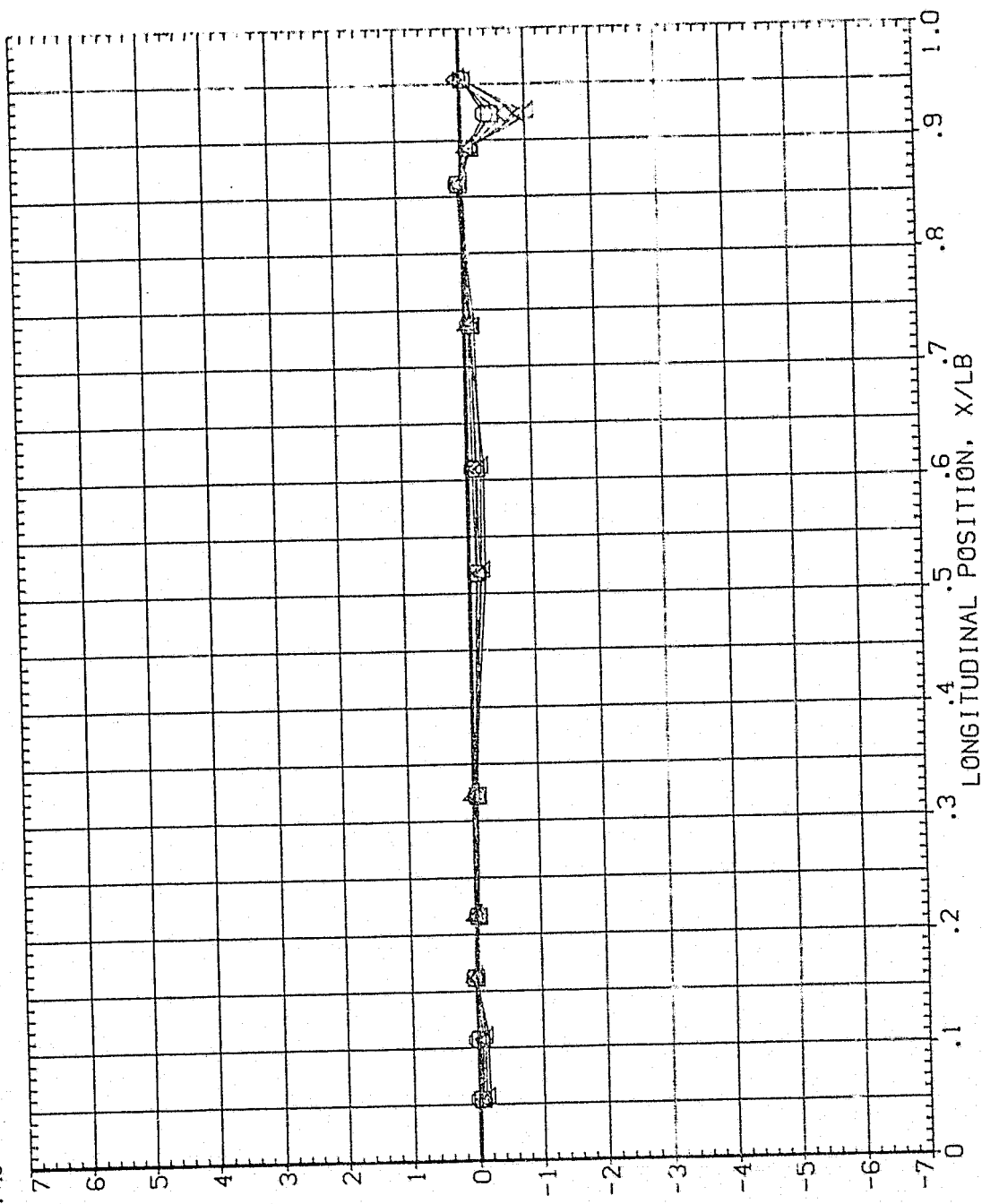


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (M1AX91)

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XHRP 1086.4000 IN. XT
 YHRP 400.0000 IN. YT
 ZHRP 400.0000 IN. ZT
 SCALE .0030

PARAMETRIC VALUES
 .000 OFFSET .000
 1.000 PHI 315.000

ALPHA
 -8.310
 -4.290
 -.280
 3.730
 7.750

SYMBOL
 ○
 □
 ◇
 △
 ▽

LOCAL NORMAL FORCE COEFFICIENT, $C_{DNM}/DC(X/LB)$

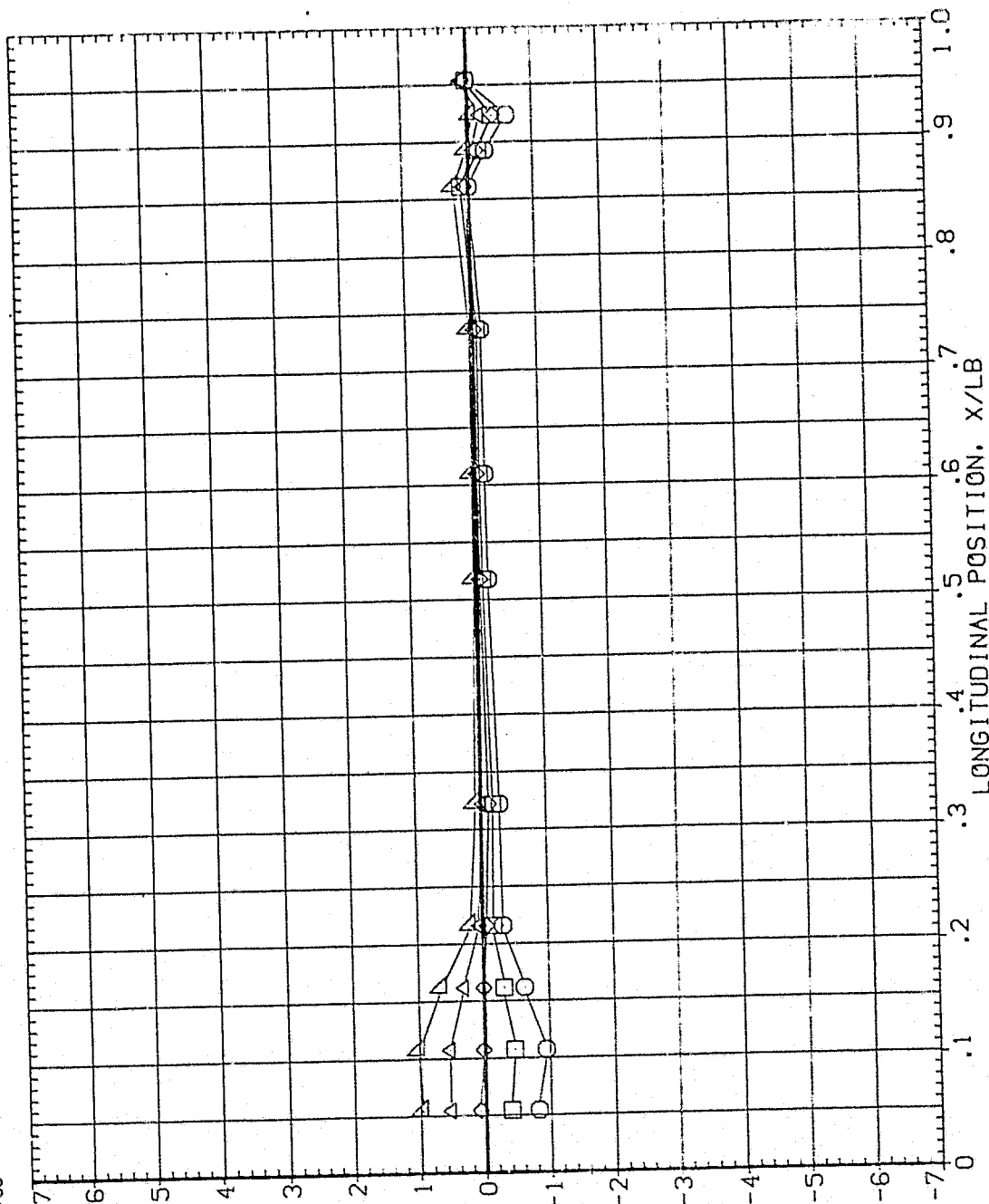
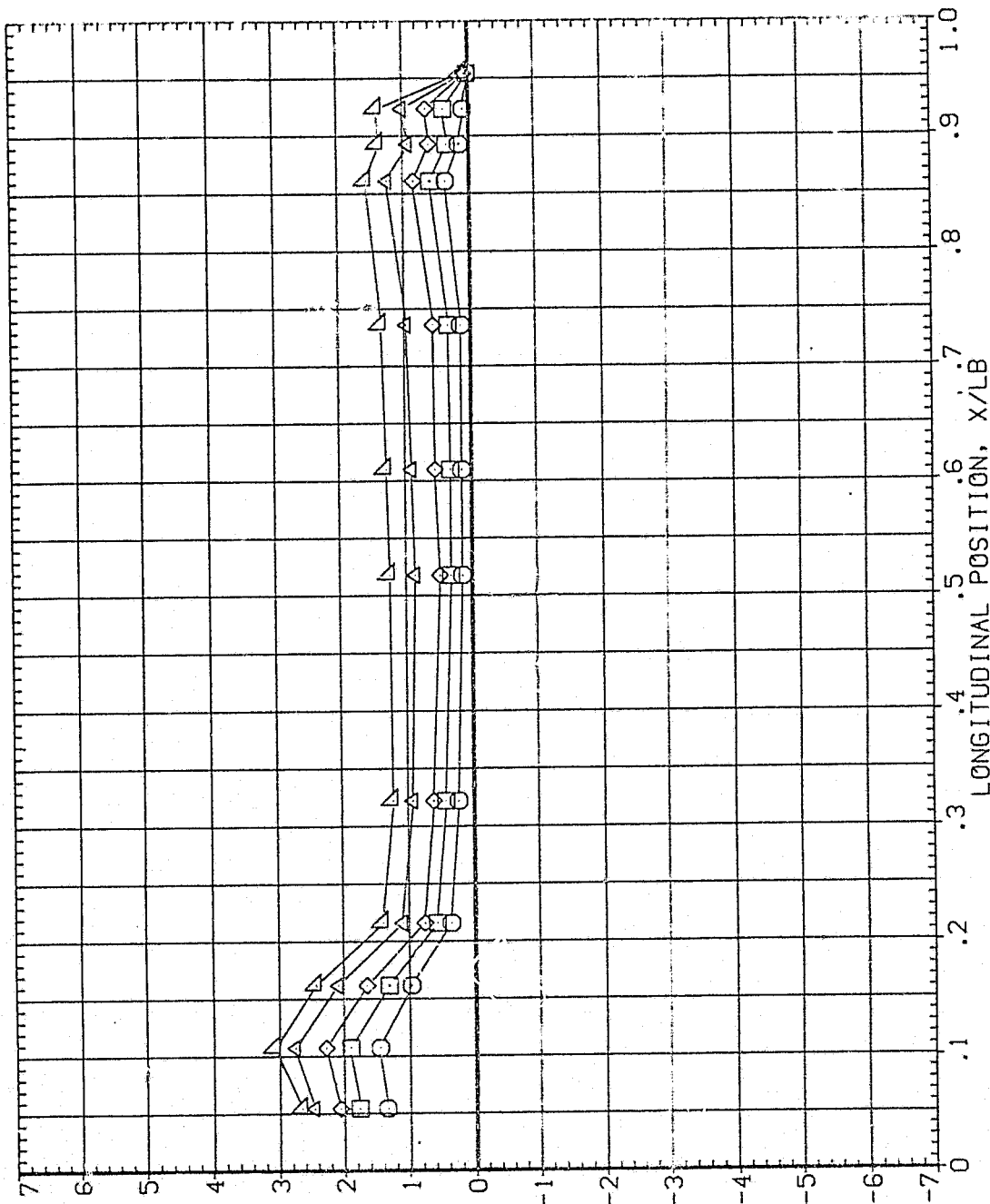


FIG. 6 LOCAL NORMAL FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	OFFSET	SREF	SO, FT	INCHES
○	12.430	0.000	20.000	572.5550	324.0000	INCHES
□	16.470	1.000	315.000	324.0000	1086.4000	IN. XT
◇	20.490			400.0000		IN. YT
△	24.510			400.0000		IN. ZT
▽	28.540			SCALE	.0030	



MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (B1AX01)

SYMBOL
 ○
 □
 ◇
 △
 ▽

ALPHA
 -8.380
 -4.330
 -1.280
 3.790
 7.860

PARAMETRIC VALUES
 BETA .000
 MOUNT 1.000
 OFFSET .000
 PHI .000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XMRP 1086.4800
 YMRP .0000
 ZMRP 400.0000
 SCALE .0030

LOCAL SIDE FORCE COEFFICIENT, $DCYM/DC(X/LB)$

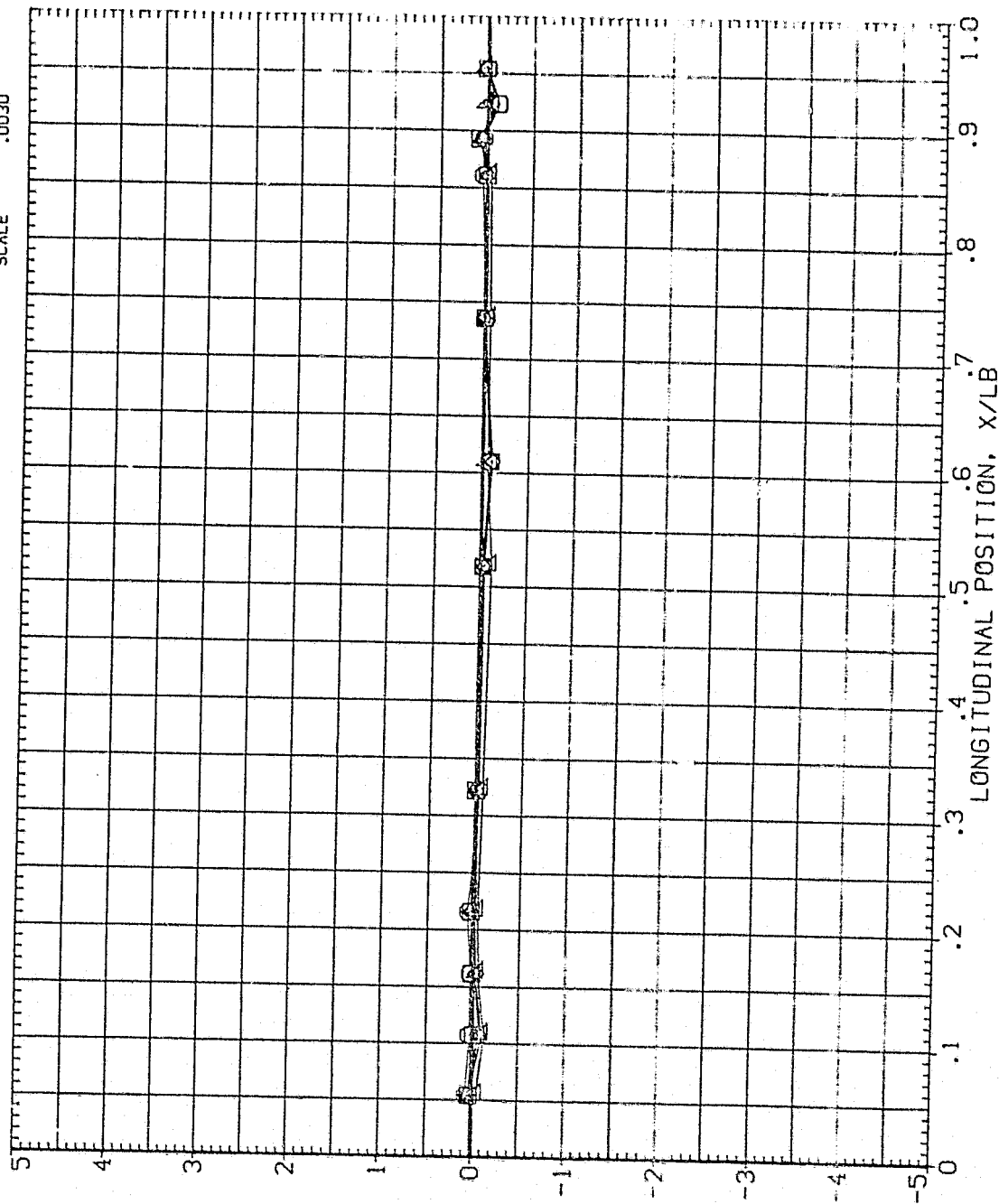


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES
 (MACH = 1.96)

SYMBOL
 ○ □ ◇ △ ▽

ALPHA 12.570
 BETA 16.660
 MOUNT 20.740
 24.850
 28.950

PARAMETRIC VALUES
 .000 OFFSET 20.000
 1.000 PHI .000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

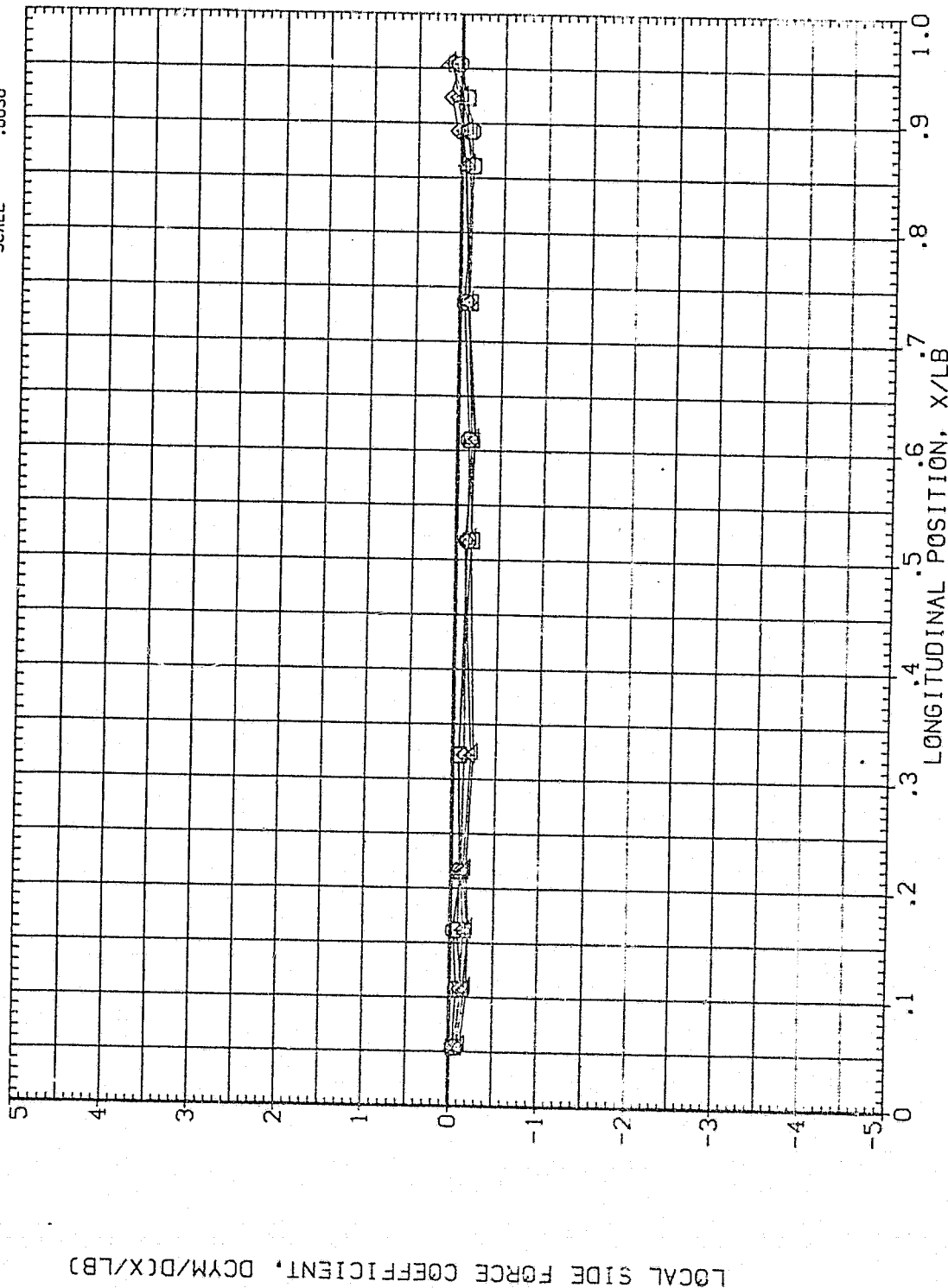


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES
 (MACH = 1.97)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (BIAX11)

SYMBOL
 ○ □ ◇ △

ALPHA
 -8.380
 -4.330
 -.280
 3.790
 7.840

PARAMETRIC VALUES
 .000 .000 .000
 PHI

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

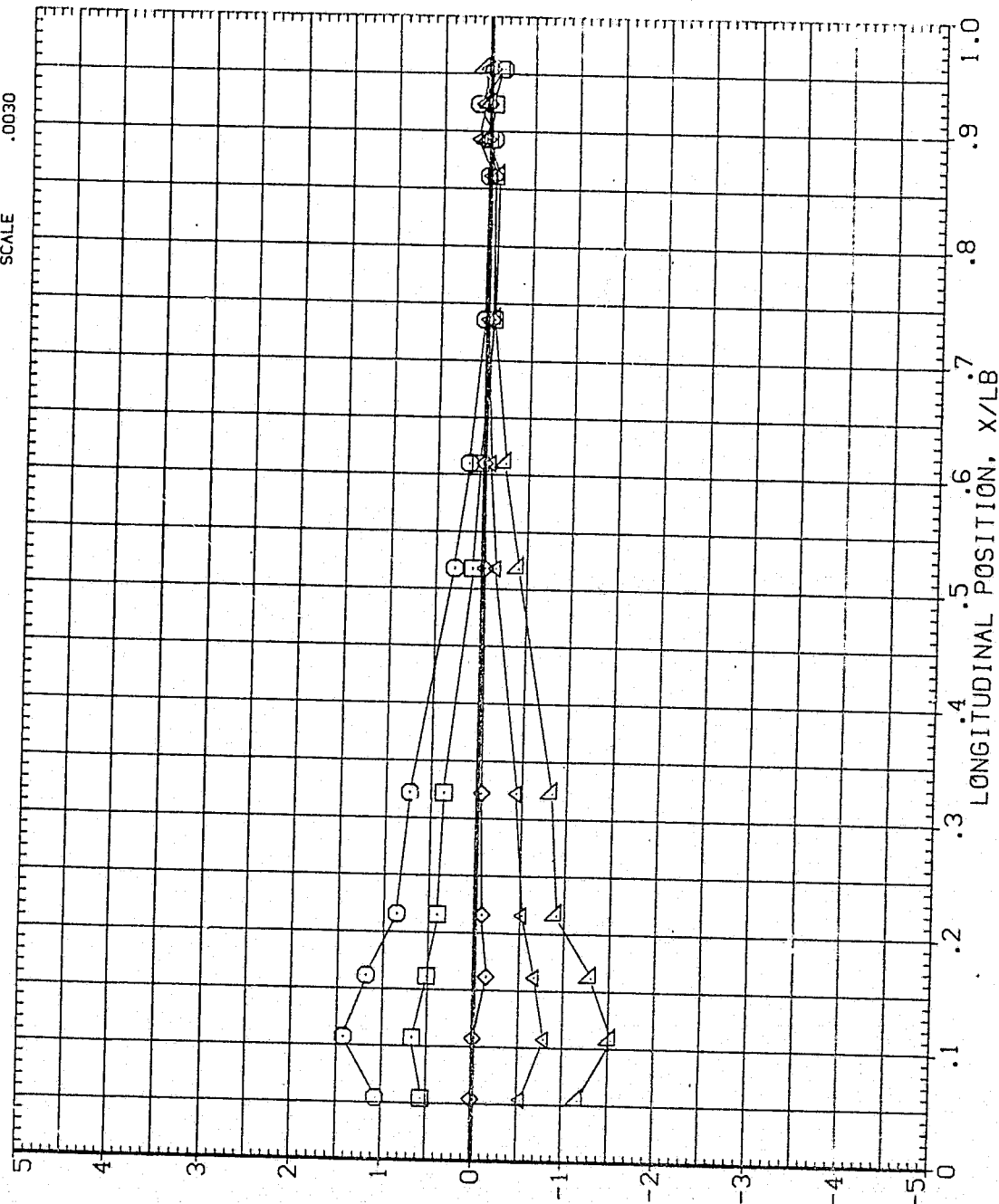


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES
 (MACH = 1.96)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (BIA16)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	12.550	0.000	0.000	SREF 572.5550
□	16.660	1.000	20.000	LREF 324.0000
◇	20.740	0.000	90.000	BREF 324.0000
△	24.850	0.000		XMRP 1086.4000
▽	28.930	0.000		YMRP 400.0000
				ZMRP 400.0000
				SCALE .0030

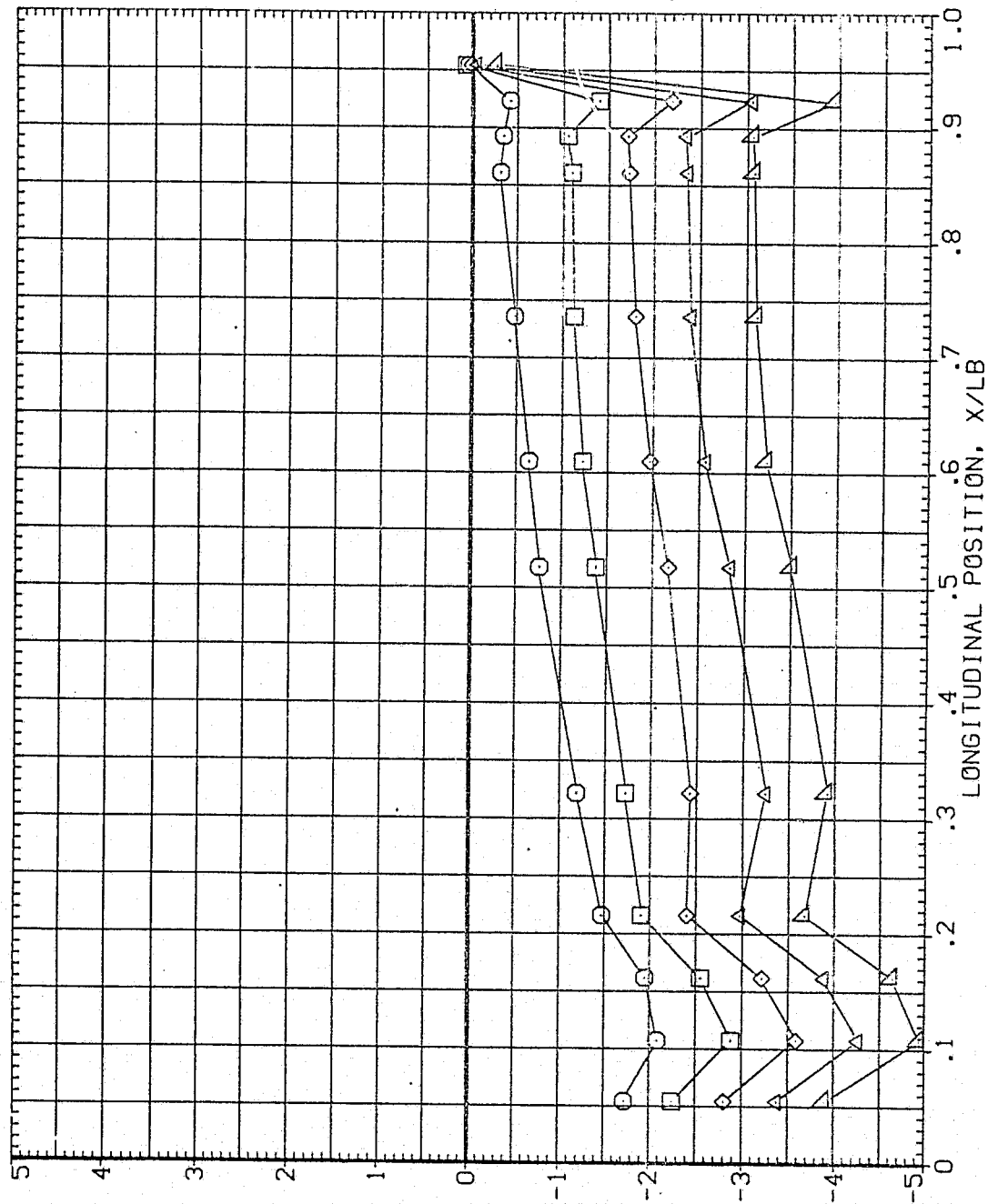


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(MACH = 1.96)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (B1AX31)

SYMBOL

PARAMETRIC VALUES

ALPHA BETA
-8.380
-4.330
-1.280
3.770
7.820

PHI
1.000
180.000

REFERENCE INFORMATION
SREF 572.5550
LREF 324.0000
BREF 324.0000
XHRP 1086.4000
YHRP 400.0000
ZHRP 400.0000
SCALE .0030

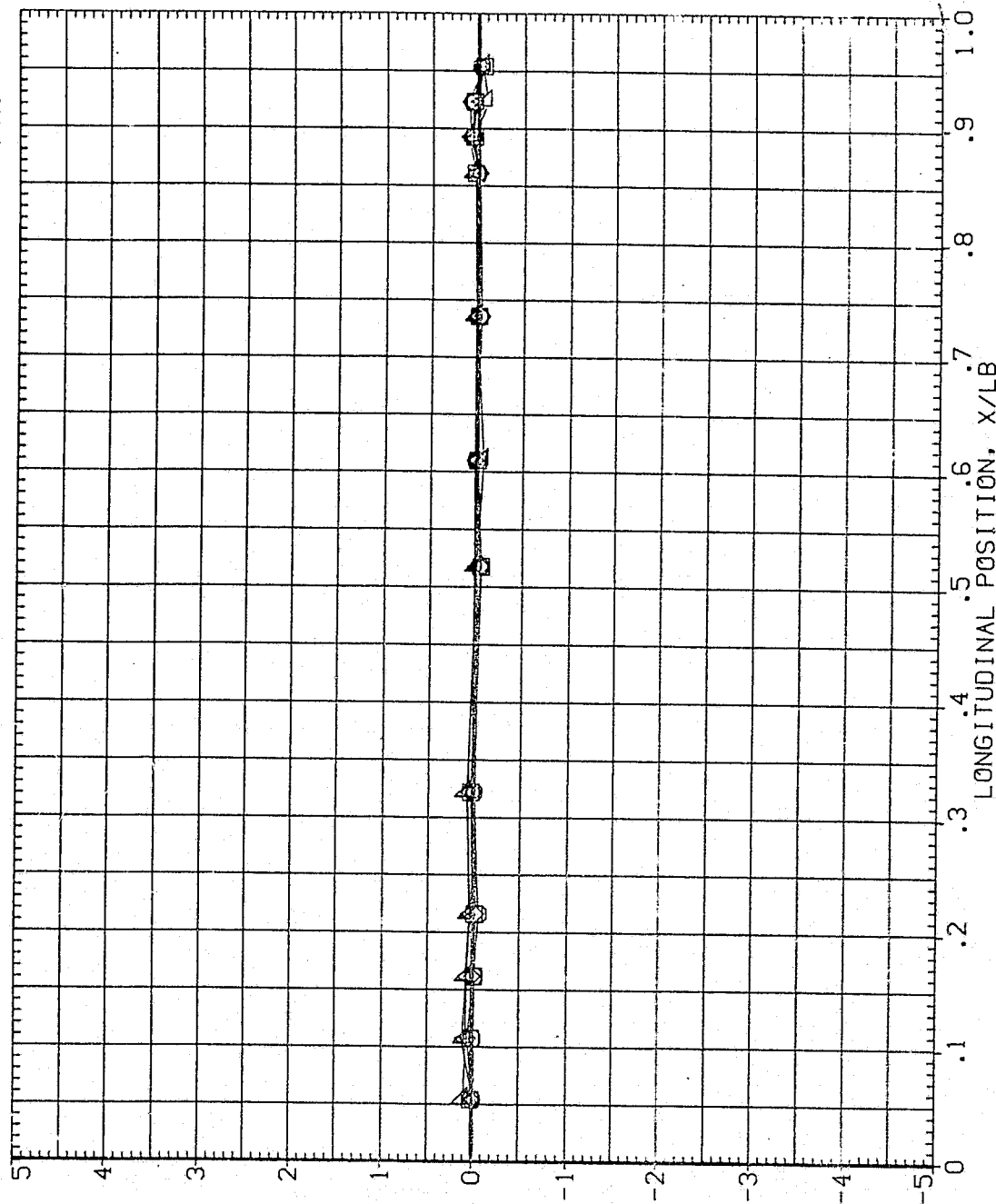


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CA/MACH = 1.96

SYMBOL	PARAMETRIC VALUES		REFERENCE INFORMATION	
	ALPHA	BETA	SREF	SO. FT
□	12.570	.000	324.0000	INCHES
◇	16.660	1.000	324.0000	INCHES
△	20.740	PHI	1086.4000	IN. X1
▽	24.870	OFFSET	.0000	IN. Y1
▽	28.930	180.000	400.0000	IN. Z1
			SCALE	.0030

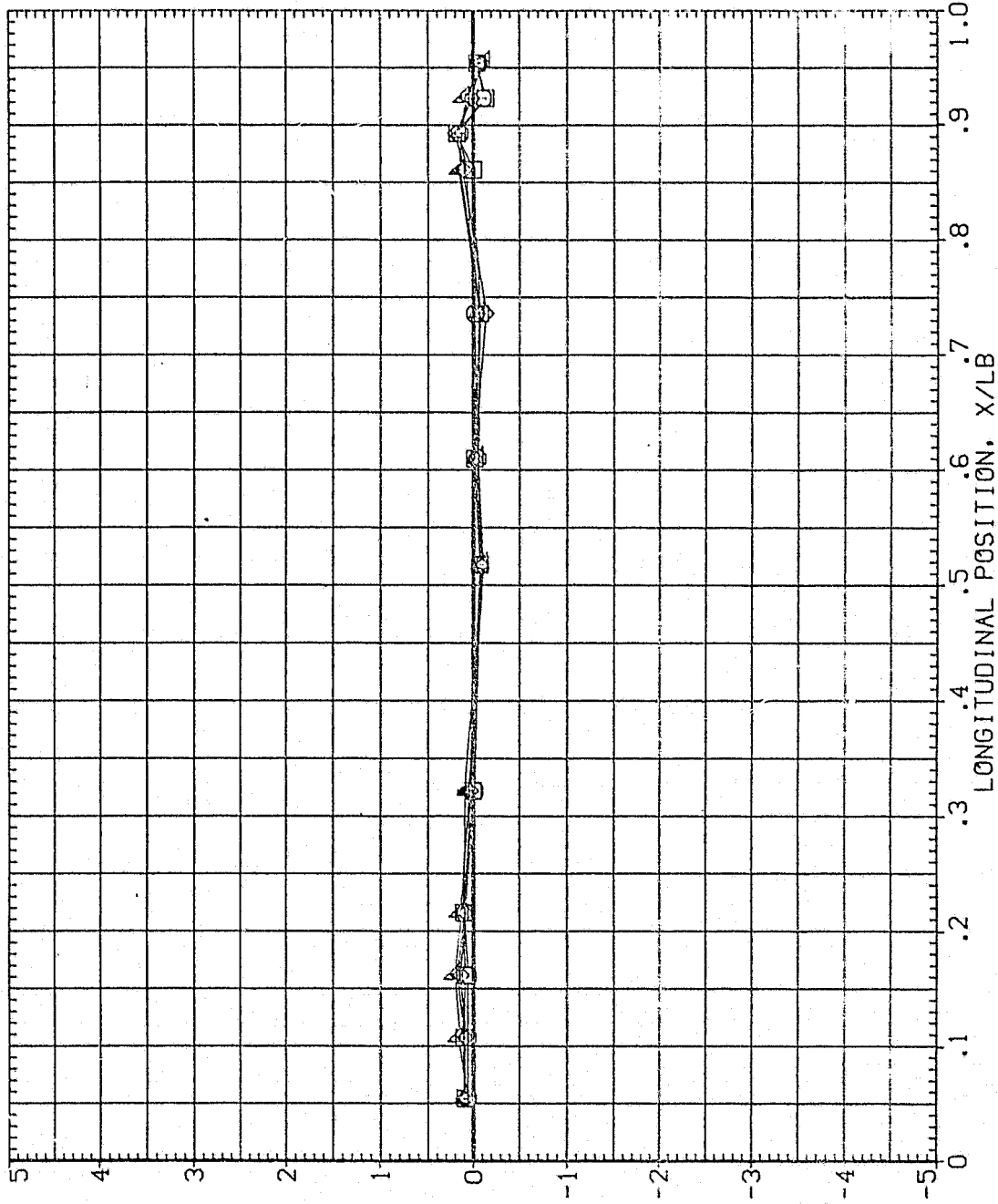


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CA/MACH = 1.97

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (B1AX51)

SYMBOL
 ○ □ ◇ △ ▽

ALPHA
 -8.380
 -4.350
 -1.280
 3.770
 7.160

BETA
 MOUNT

PARAMETRIC VALUES
 .000 .000 .000
 1.000 PHI 270.000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 YHRP 1086.4000 IN. XT
 ZHRP .0000 IN. YT
 400.0000 IN. ZT
 SCALE .0030

LOCAL SIDE FORCE COEFFICIENT, $DCYM/DC(X/LB)$

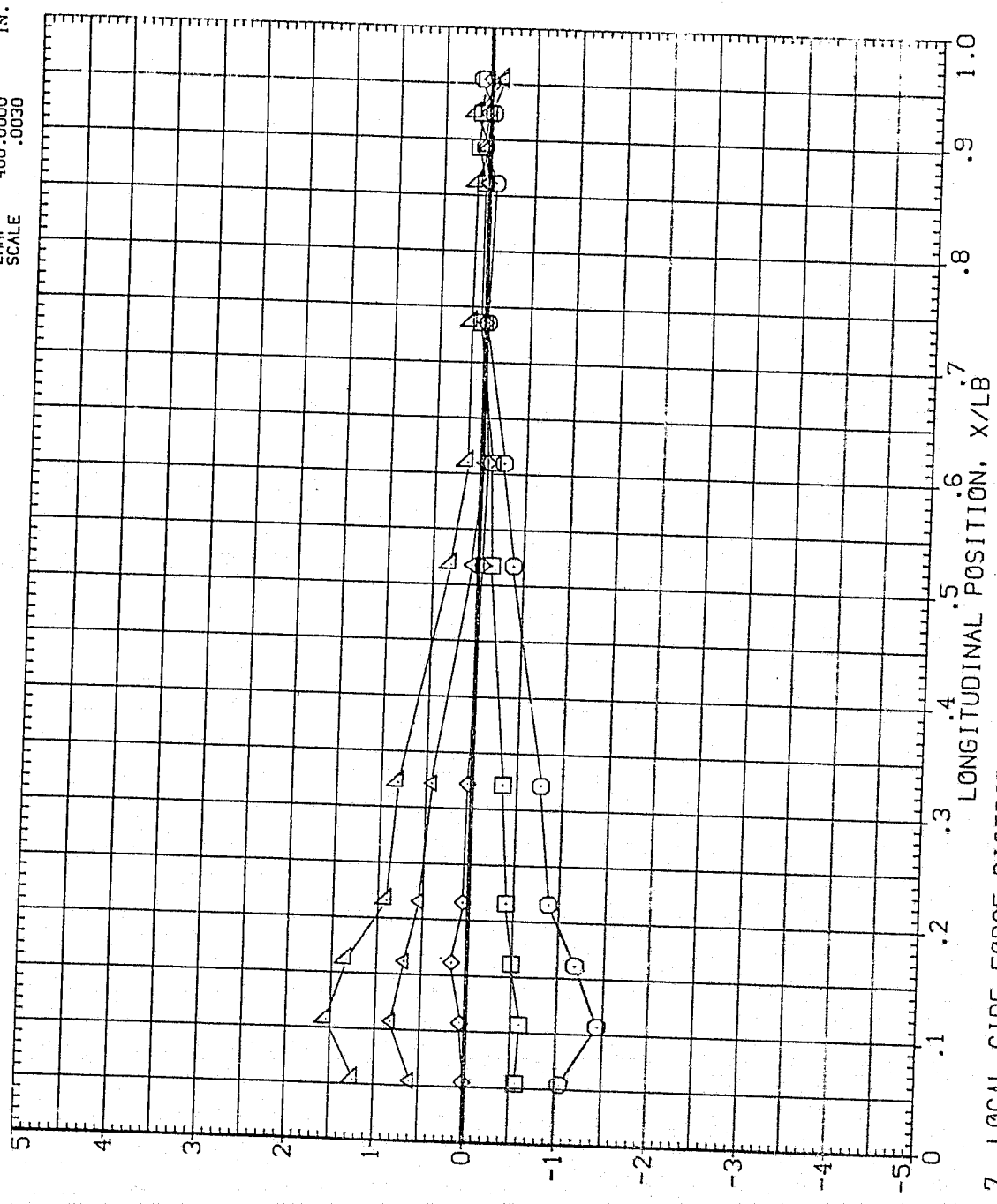


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES
 (MACH = 1.95)

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	PHI	SREF	SQ. FT	INCHES
○	12.570	.000	20.000	LREF	324.0000	IN. XT
□	16.640	1.000	270.000	BREF	324.0000	IN. XT
◇	20.740			XMRP	1086.4000	IN. XT
△	24.850			ZMRP	400.0000	IN. XT
	28.930			SCALE	.0030	

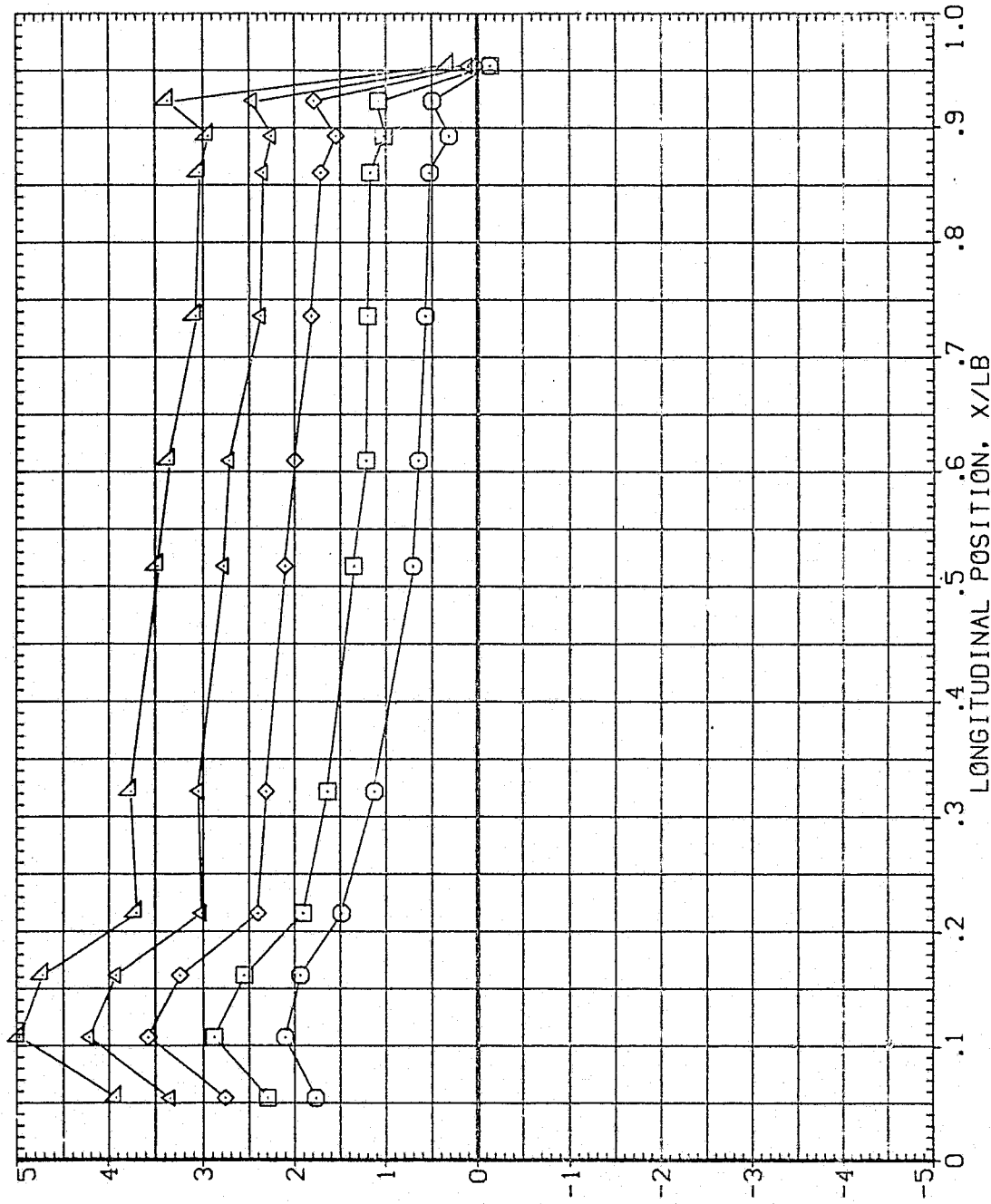


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01A001)

SYMBOL ALPHA BETA HOUNT
 ○ -8.360
 □ -4.330
 ◇ -2.280
 △ 3.770
 ▽ 7.000

PARAMETRIC VALUES
 .000 .000
 1.000 PH1

LOCAL SIDE FORCE COEFFICIENT, $C_{YM}/D(X/LB)$

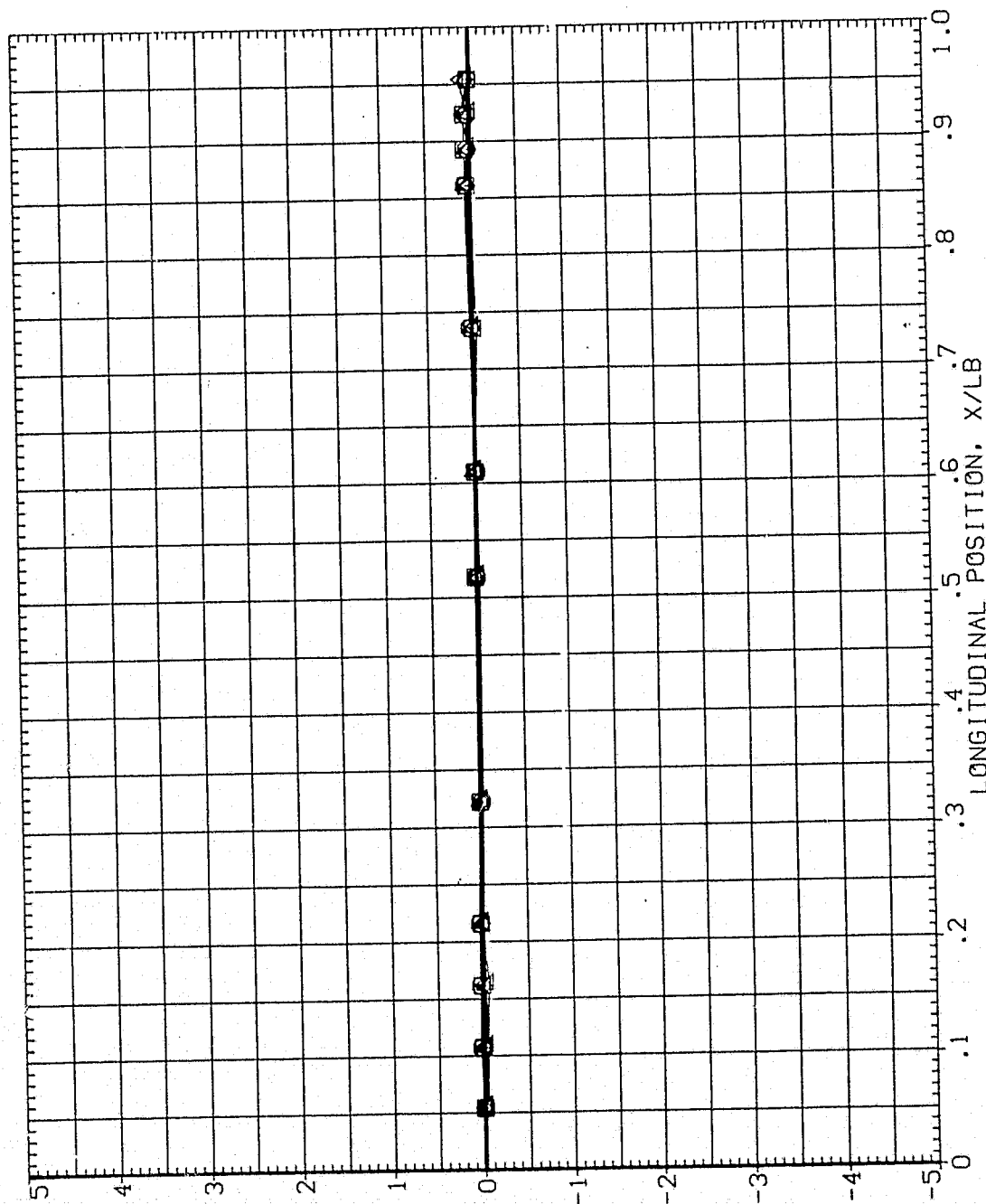


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION			
	ALPHA	BETA	PHI	SREF	SO. FT	INCHES	IN. XT
○	12.520	.000	OFFSET	572.5550	324.0000	IN. XT	IN. XT
□	16.560	1.000	PHI	324.0000	1086.4000	IN. XT	IN. XT
◇	20.610			YMRP	400.0000	IN. XT	IN. XT
△	24.660			ZMRP	400.0000	IN. XT	IN. XT
▽	28.700			SCALE	.0030		

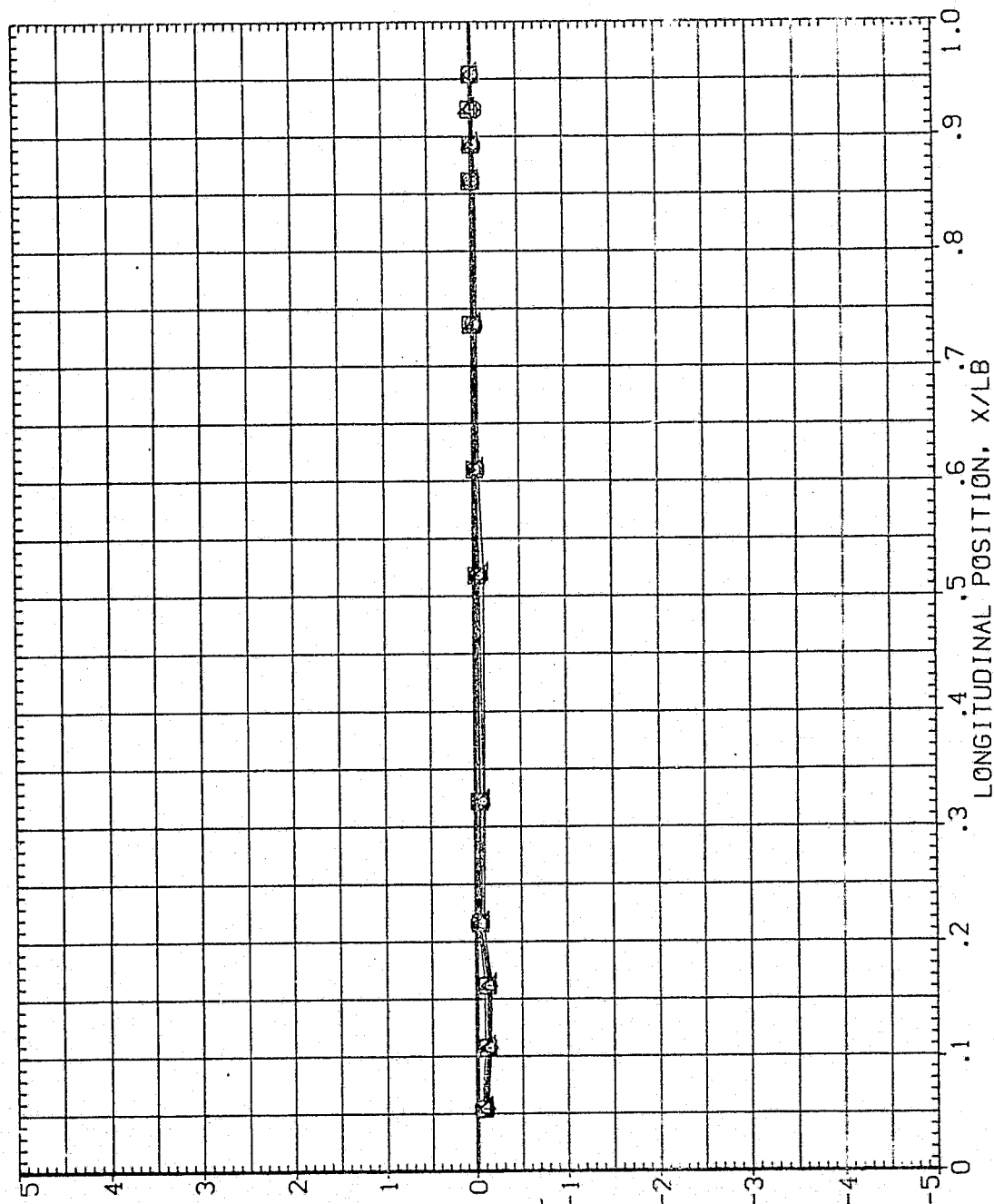


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(MACH = 3.48)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01A081)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	-8.380	0.000	OFFSET	SREF 572.5550
□	-4.330	1.000	PHI	LREF 324.0000
◇	-280			BREF 324.0000
△	3.770			XMRP 1086.4020
▽	7.800			YMRP .0000
				ZMRP 400.0000
				SCALE .0030

LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB)

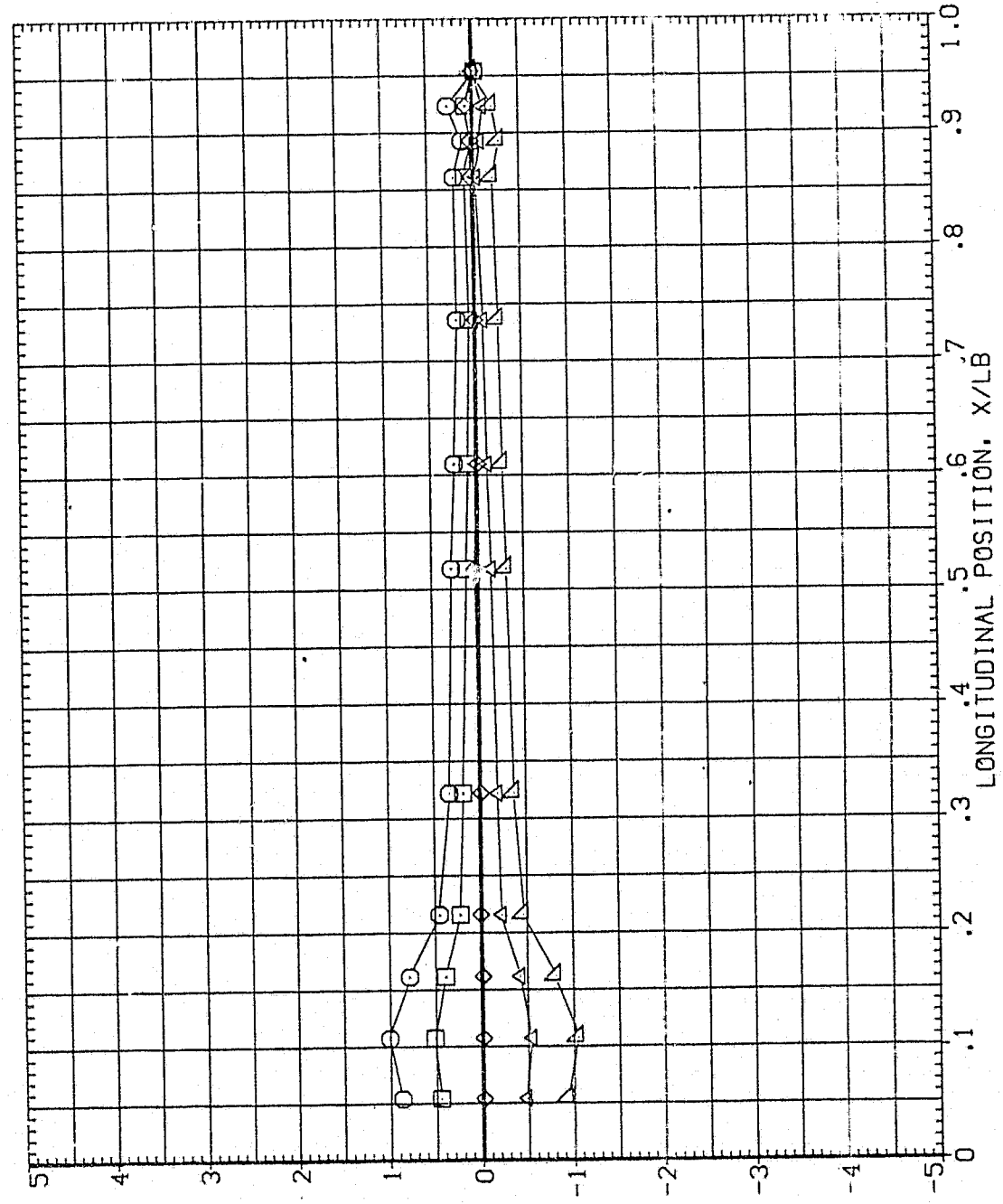


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	12.520	HOUNT	.000	SREF 572.5550
□	16.560	PHI	1.000	LREF 324.0000
◇	20.610			BREF 324.0000
△	24.660			XMRP 1086.4000
▽	28.700			YMRP 400.0000
				ZMRP 400.0000
				SCALE .0030

LOCAL SIDE FORCE COEFFICIENT, DCY/DX/LB

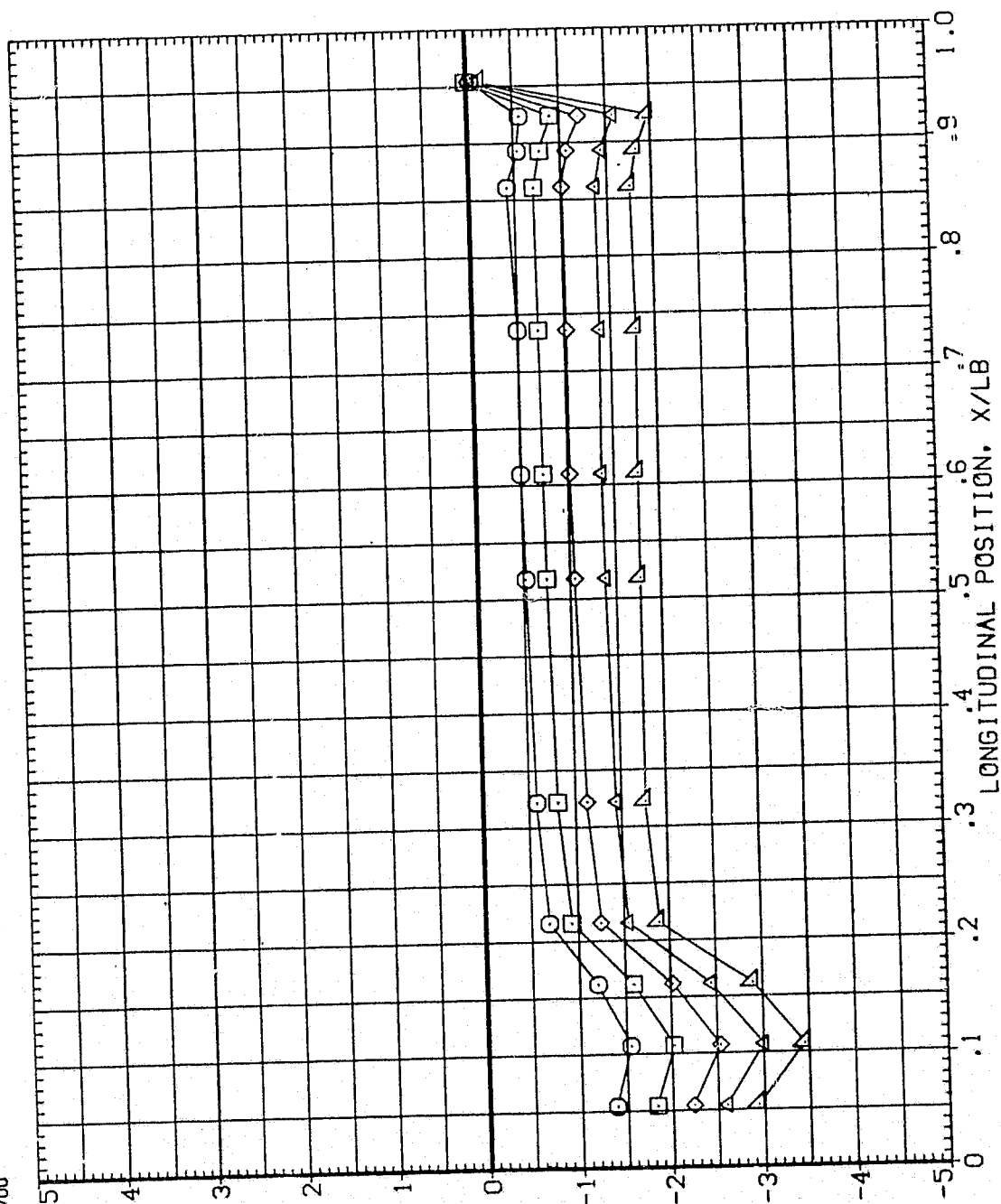


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A) MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01A011)

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	OFFSET	SREF	SD, FT	INCHES
◇	-8.360	.000	.000	LREF	572.5550	INCHES
□	-4.330	1.000	PHI	BRF	324.0000	INCHES
◇	-2.280			YMRP	1086.4000	IN. XT
◇	3.770			ZMRP	400.0000	IN. YT
△	7.800			SCALE	.0030	IN. ZT

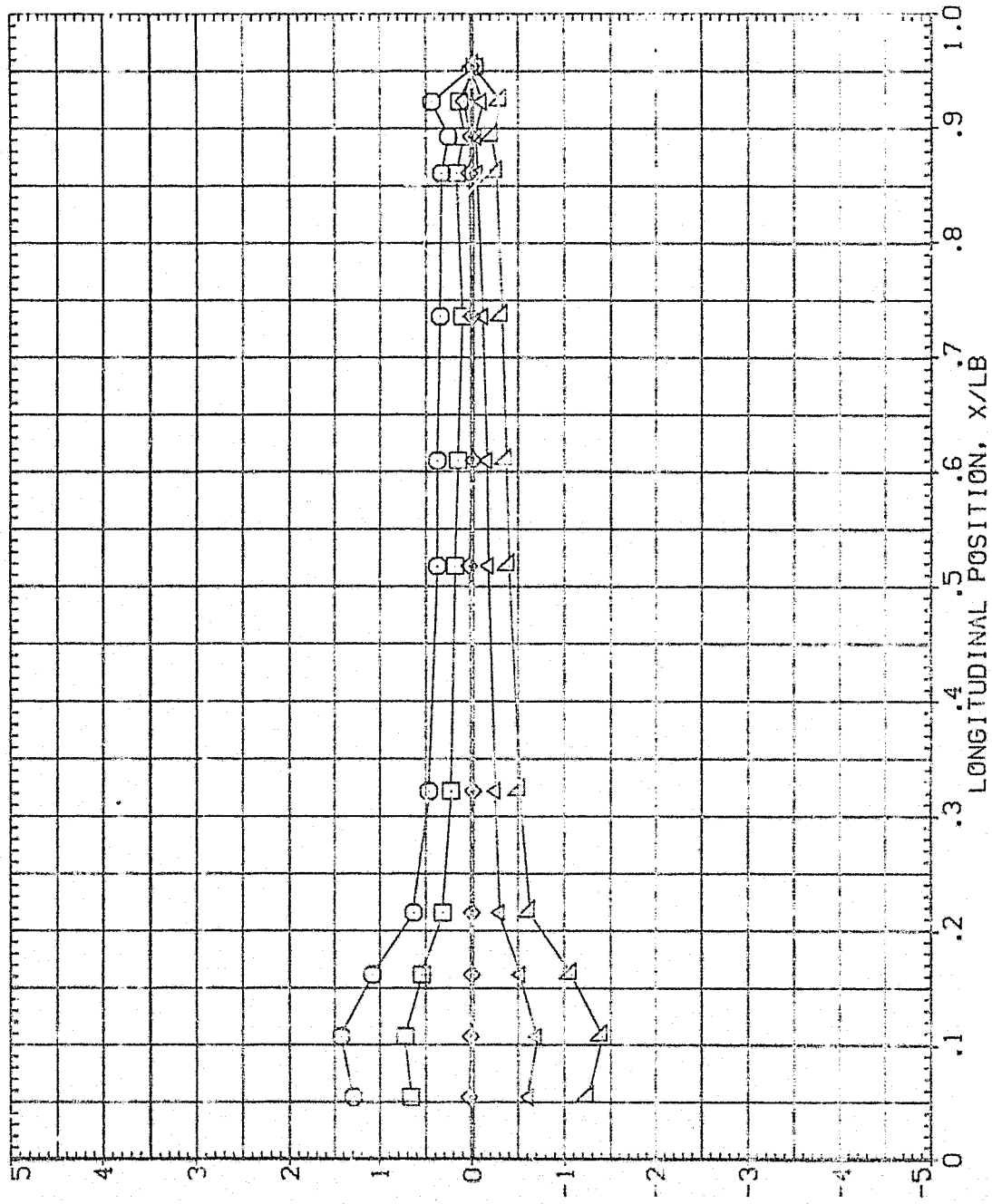


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	PHI	SREF	SG	FT
○	12.520	0.000	0.000	572.5550	INCHES	INCHES
□	16.560	1.000	0.000	324.0000	INCHES	INCHES
◇	20.610	0.000	0.000	1086.4000	IN. XT	IN. XT
△	24.660	0.000	0.000	400.0000	IN. YI	IN. YI
▽	28.700	0.000	0.000	400.0000	IN. ZI	IN. ZI
				SCALE		

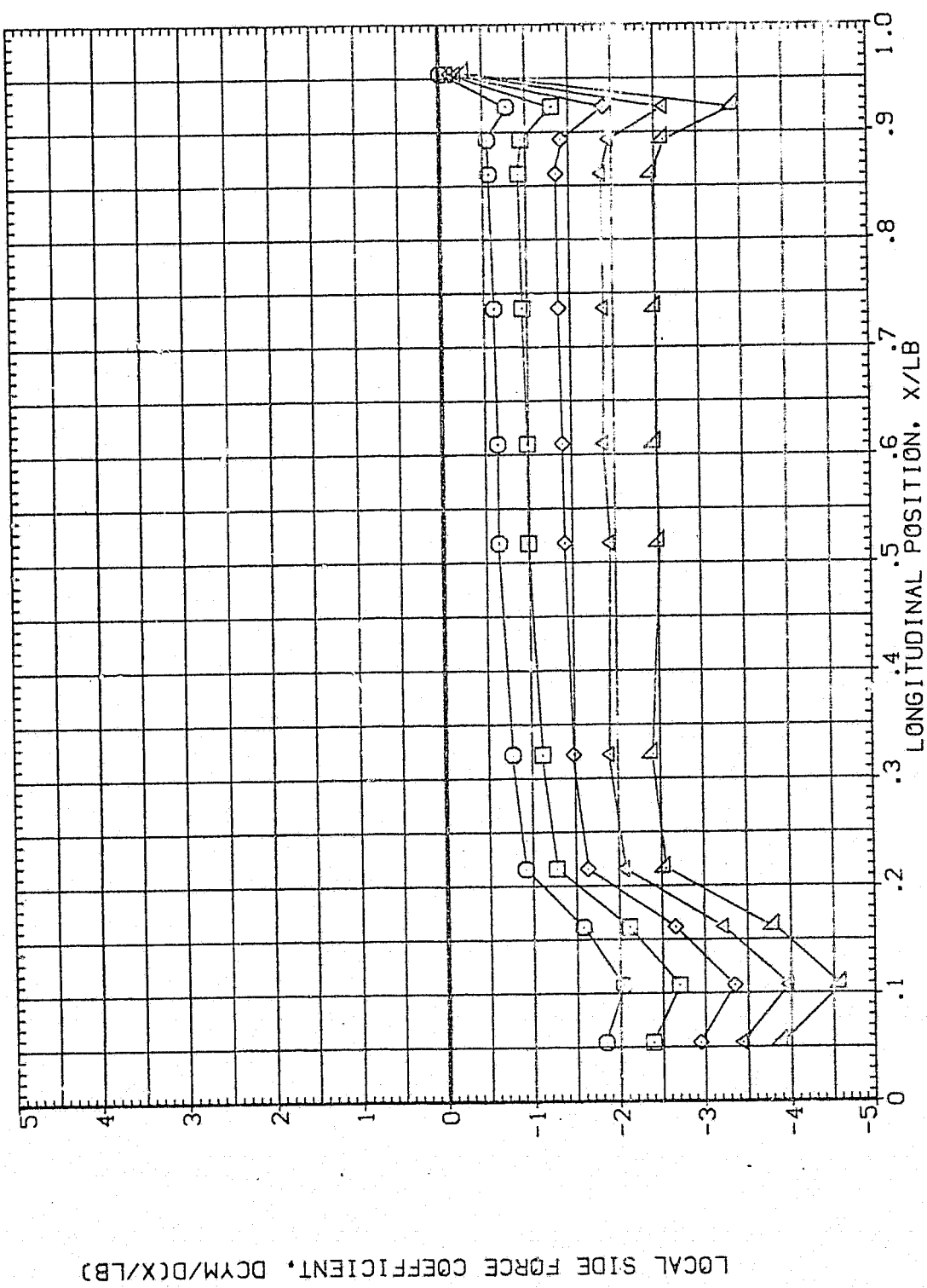


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01AC21)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	-8.360	.000	OFFSET	SREF 572.5550
□	-4.330	1.000	PHI	LREF 324.0000
◇	-2.280			BREF 324.0000
△	3.720			XMRP 1086.4000
▽	7.710			YMRP .0000
				ZMRP 400.0000
				SCALE .0030

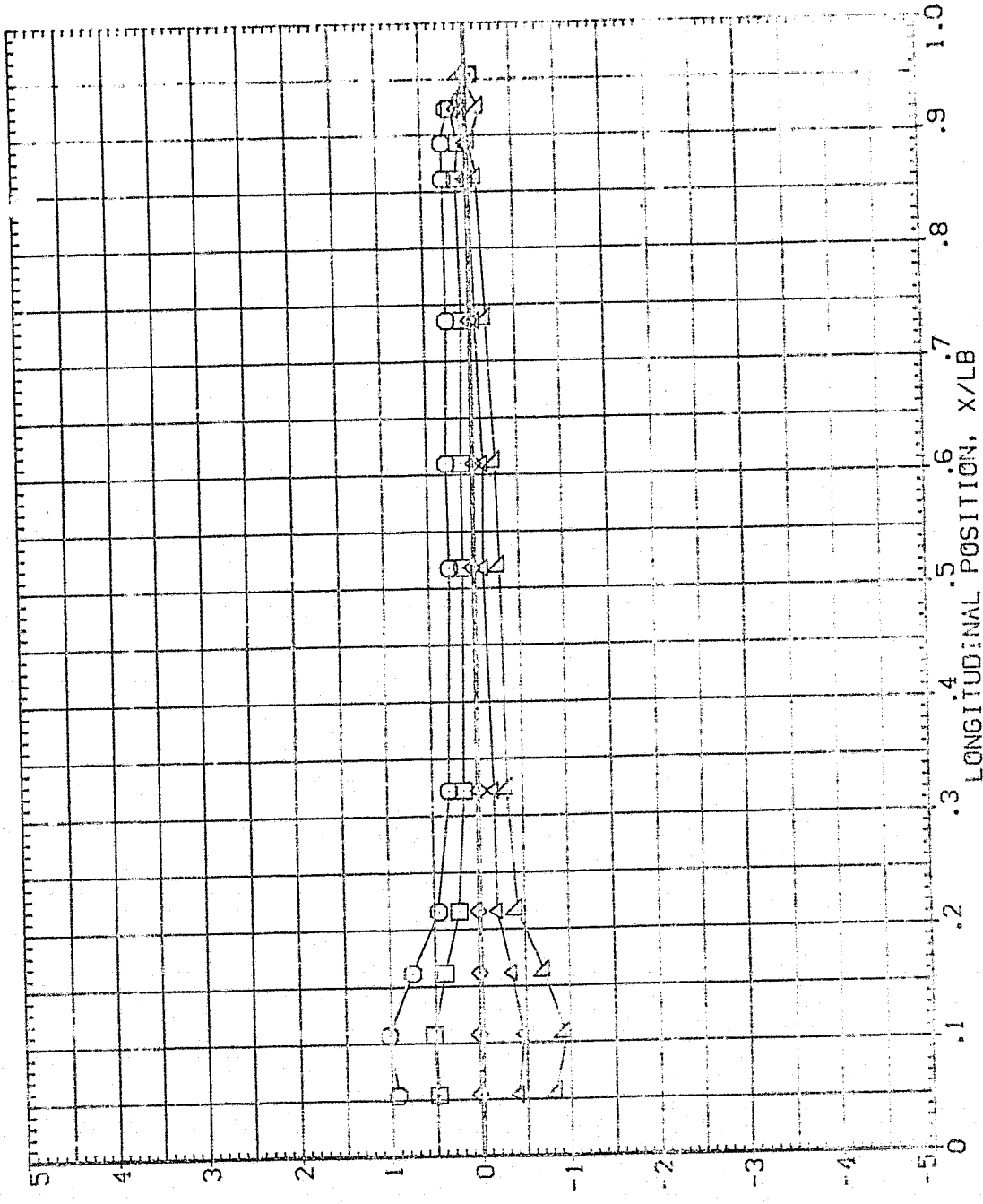


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 YMRP 1086.4000 IN. XT
 ZMRP 400.0000 IN. YT
 SCALE .0030

PARAMETRIC VALUES
 ALPHA 12.520 BETA .000 OFFSET 20.000
 16.540 MOUNT 135.000
 20.610
 24.660
 28.700

SYMBOL
 ○ □ ◇ △ ▽

LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB

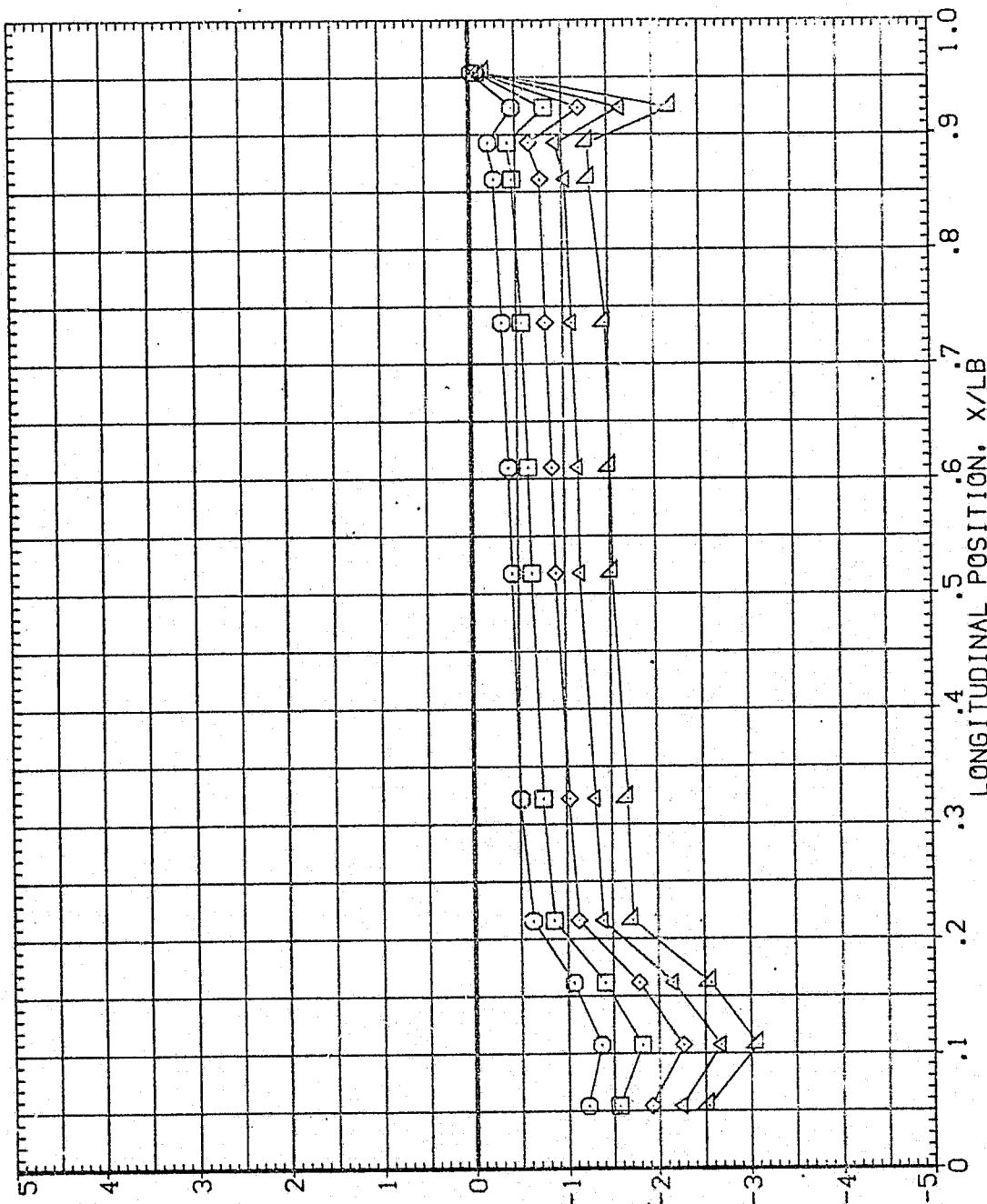


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01A031)

SYMBOL	PARAMETRIC VALUES		REFERENCE INFORMATION	
	ALPHA	BETA	SREF	SQ. FT
○	-8.360	BETA	LREF	INCHES
□	-4.330	MOUNT	BREF	INCHES
◇	-280		XMRP	IN. XT
▽	3.770		YMRP	IN. YT
△	7.400		ZMRP	IN. ZT
			SCALE	.0030

LOCAL SIDE FORCE COEFFICIENT, $DCYM/DC(X/LB)$

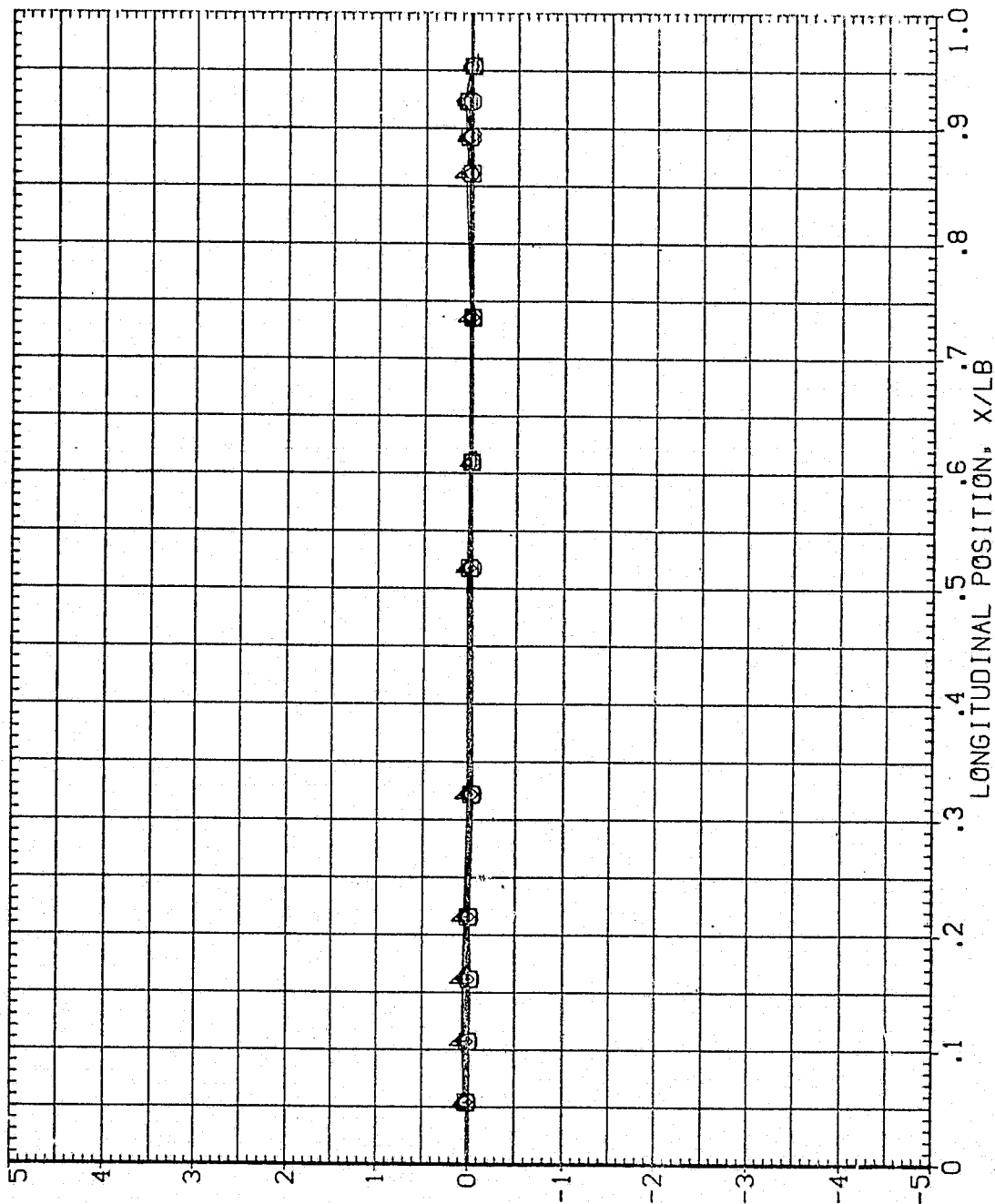


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

REFERENCE INFORMATION
 SREF 572.5550 SO. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

PARAMETRIC VALUES
 .000 OFFSET 20.000
 1.000 PHI 180.000

ALPHA
 12.540
 16.560
 20.610
 24.560
 28.700

SYMBOL
 ○
 □
 ◇
 △
 ▽

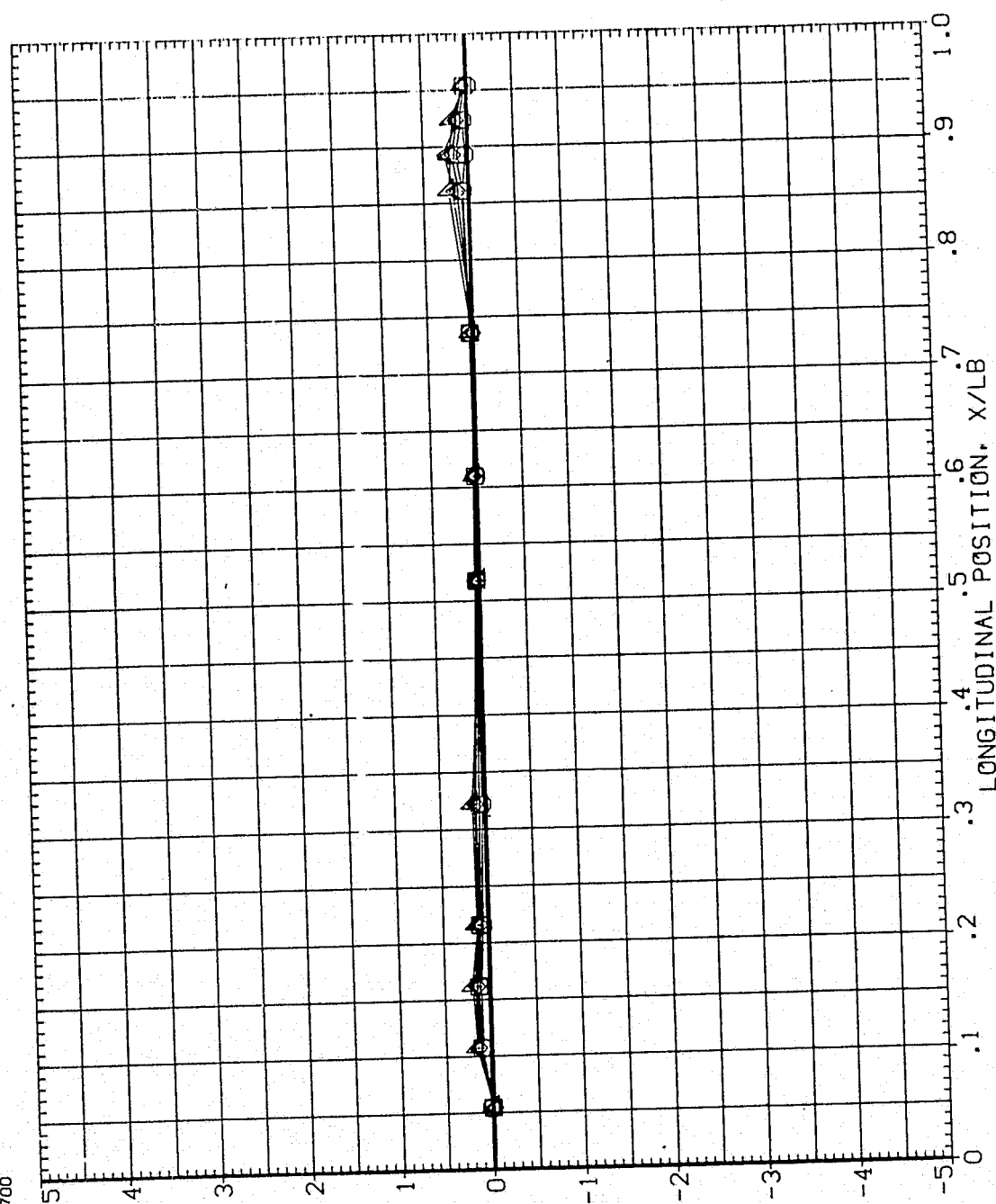


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(MACH = 3.48)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01A041)

SYMBOL
 7
 4
 3
 2
 1
 0
 -1
 -2
 -3
 -4
 -5

ALPHA
 0.300
 -4.330
 -1.280
 3.770
 7.800

PARAMETRIC VALUES
 .CGG 1.000
 .OFFSET 1.000
 PHI 1.000

.CGG 225.000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XMRP 1086.4000
 YMRP .0000
 ZMRP 400.0000
 SCALE .0030

LOCAL SIDE FORCE COEFFICIENT, DCYM/DC(X/LB)

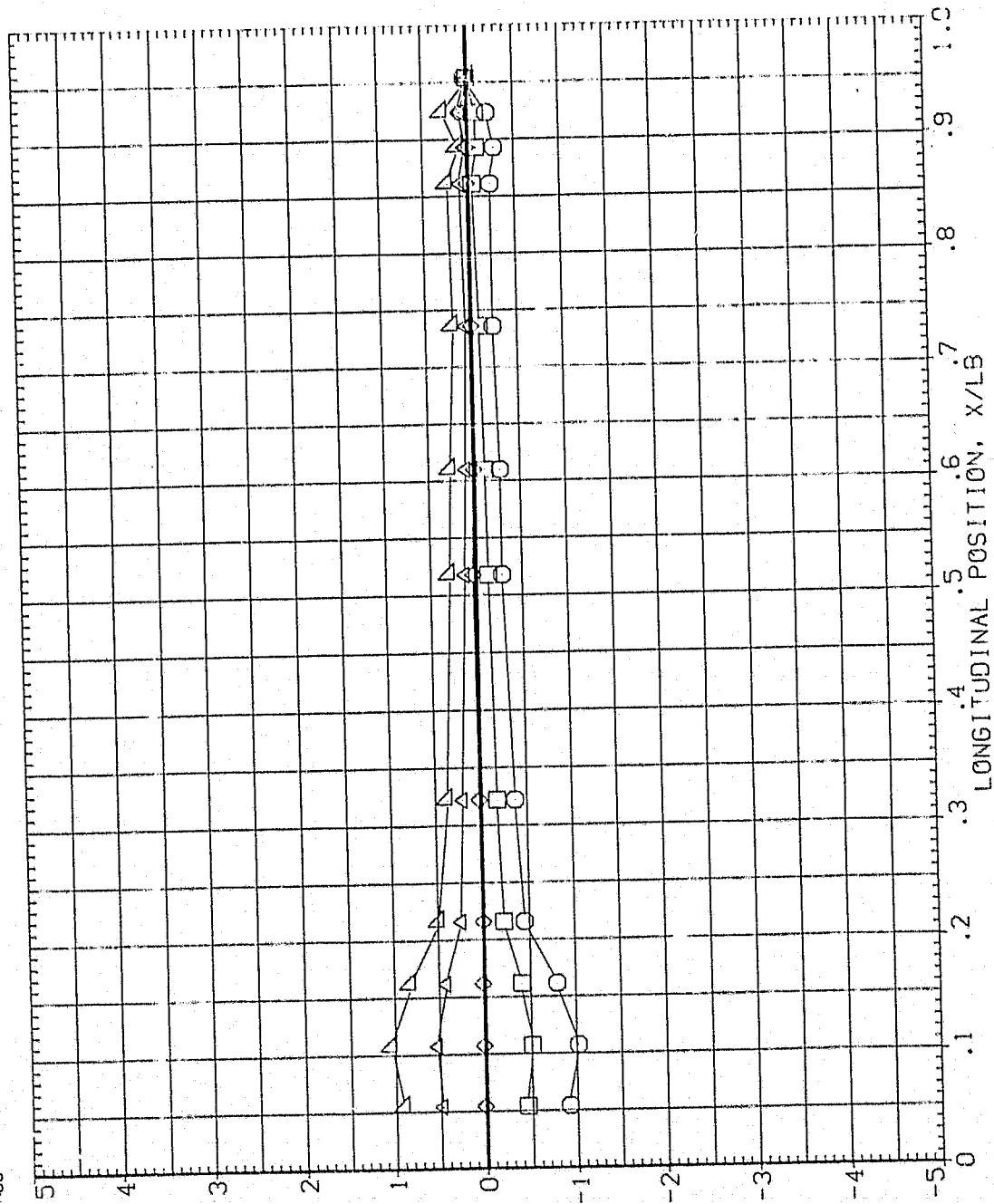


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

SYMBOL
 ○ □ ◇ △ ▽

ALPHA
 12.520
 16.560
 20.610
 24.660
 28.720

BETA
 MOUNT

PARAMETRIC VALUES
 .000 OFFSET
 1.000 PHI

20.000
 225.000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XMRP 1086.4000
 YMRP .0000
 ZMRP 400.0000
 SCALE .0030

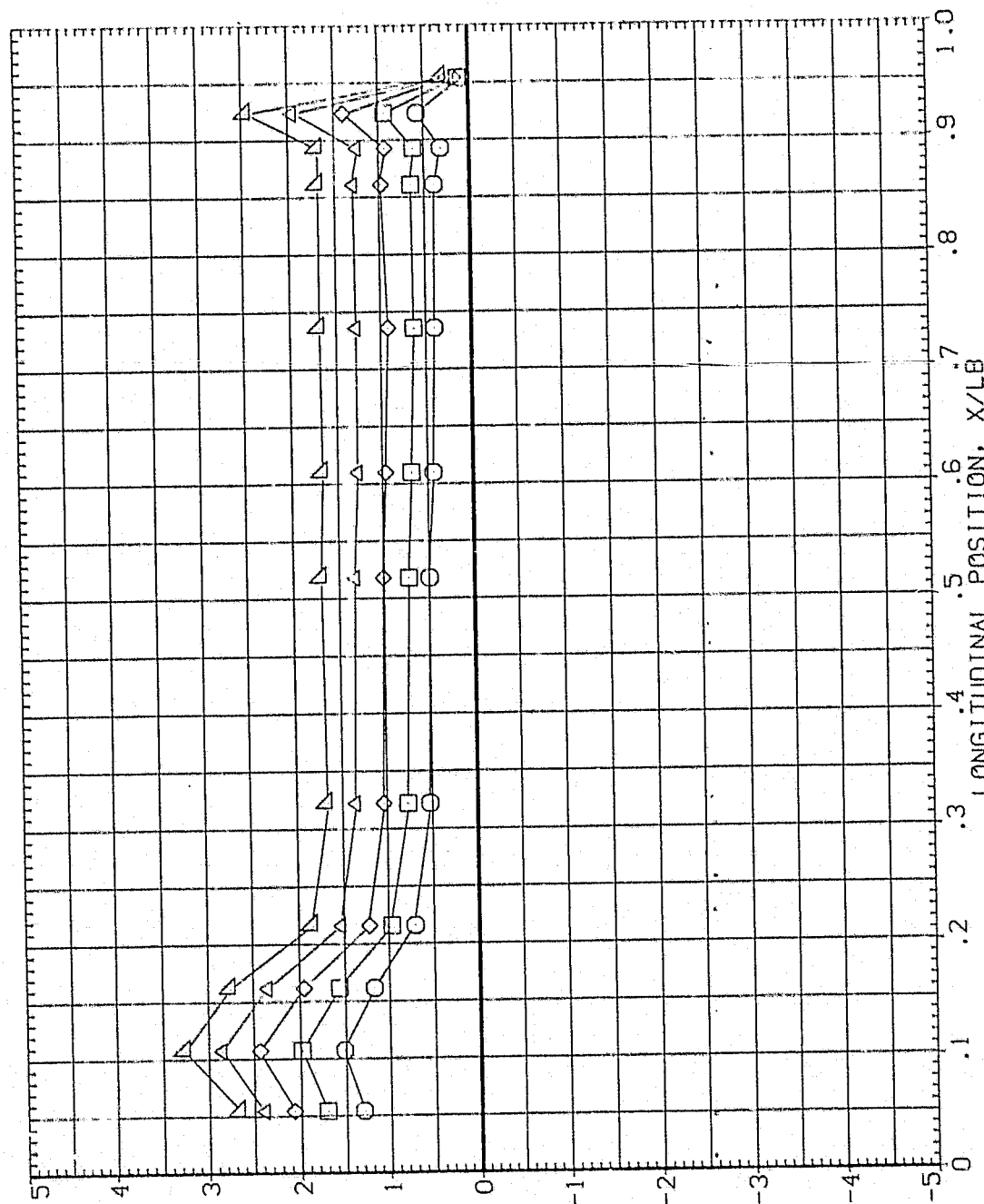


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

REPRODUCIBILITY OF THE
 ORIGINAL PAGE IS POOR

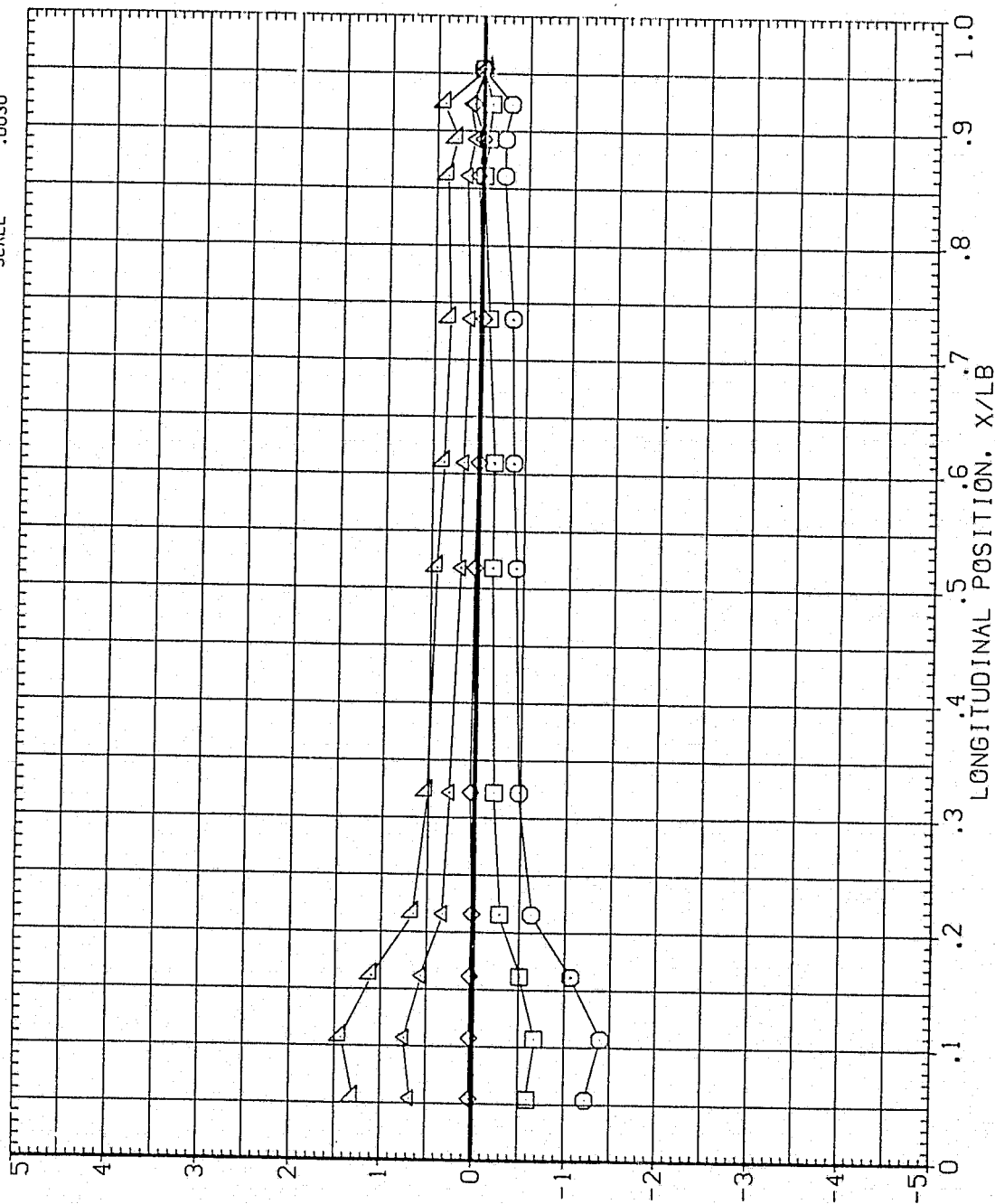
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01AD51)

SYMBOL
○
□
◇
△

ALPHA
-8.360
-4.330
-.280
3.790
7.900

PARAMETRIC VALUES
BETA .000
MOUNT 1.000
OFFSET PHI .000
270.000

REFERENCE INFORMATION
SREF 572.5550 SO. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. X
YMRP .0000 IN. Y
ZMRP 400.0000 IN. Z
SCALE .0030



LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB

FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	OFFSET	SREF	SG, FT	INCHES
○	12.520	0.000	20.000	LBFF	324.0000	INCHES
□	16.540	1.000	270.000	BRFF	324.0000	INCHES
◇	20.610			XRRP	1086.4333	IN. XT
△	24.680			YRRP	.0000	IN. YT
▽	28.700			ZRRP	400.0000	IN. ZT
				SCALE	.0030	

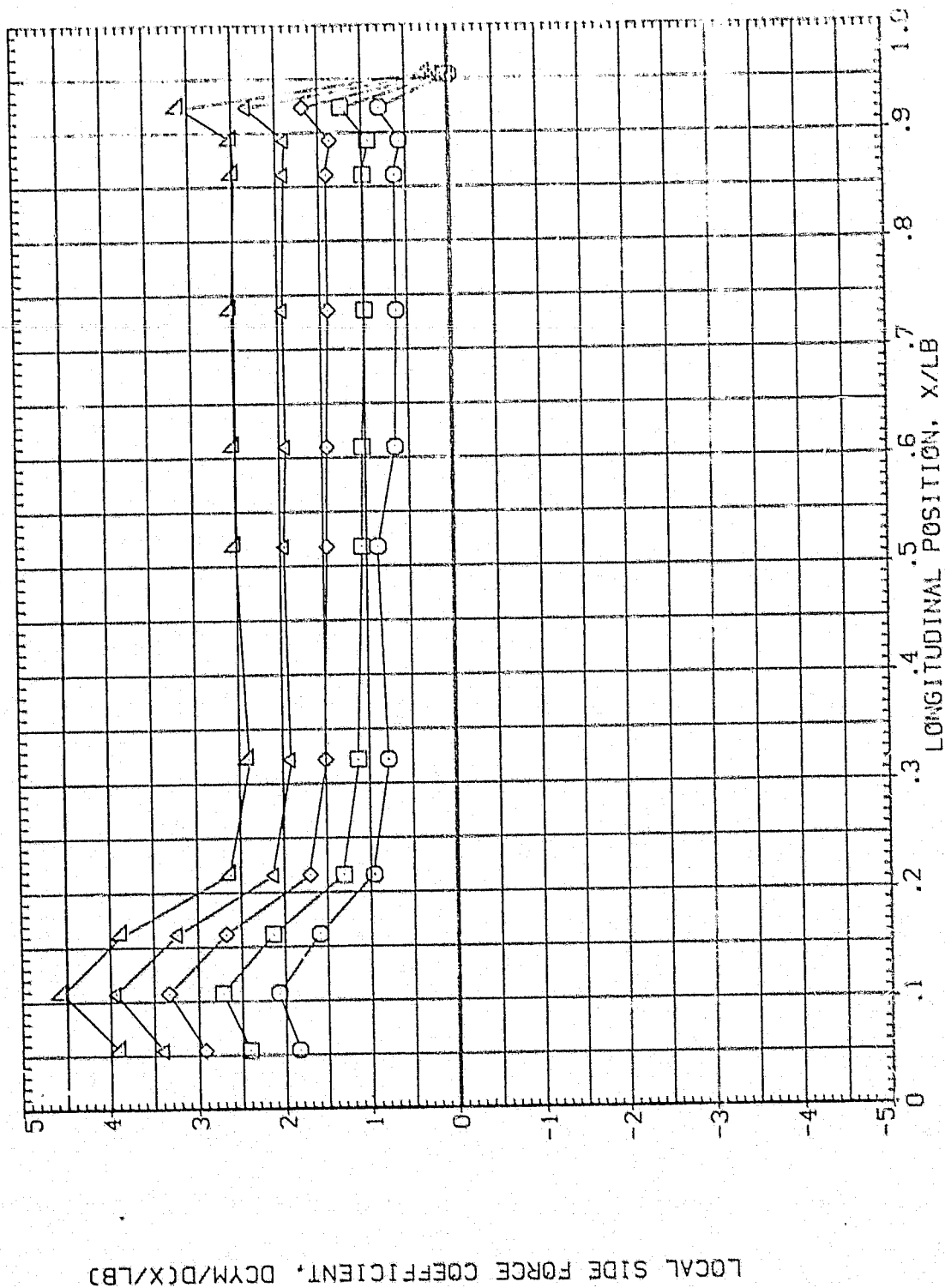


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(M)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01A091)

SYMBOL
 ○
 □
 ◇
 △

ALPHA
 -8.360
 -4.330
 -.280
 3.770
 7.000

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 1.000
 .000
 PHI
 315.000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XHRP 1086.4000 IN. XT
 YHRP .0000 IN. YT
 ZHRP 400.0000 IN. ZT
 SCALE .0030

LOCAL SIDE FORCE COEFFICIENT, $DCYM/DCX/LB$

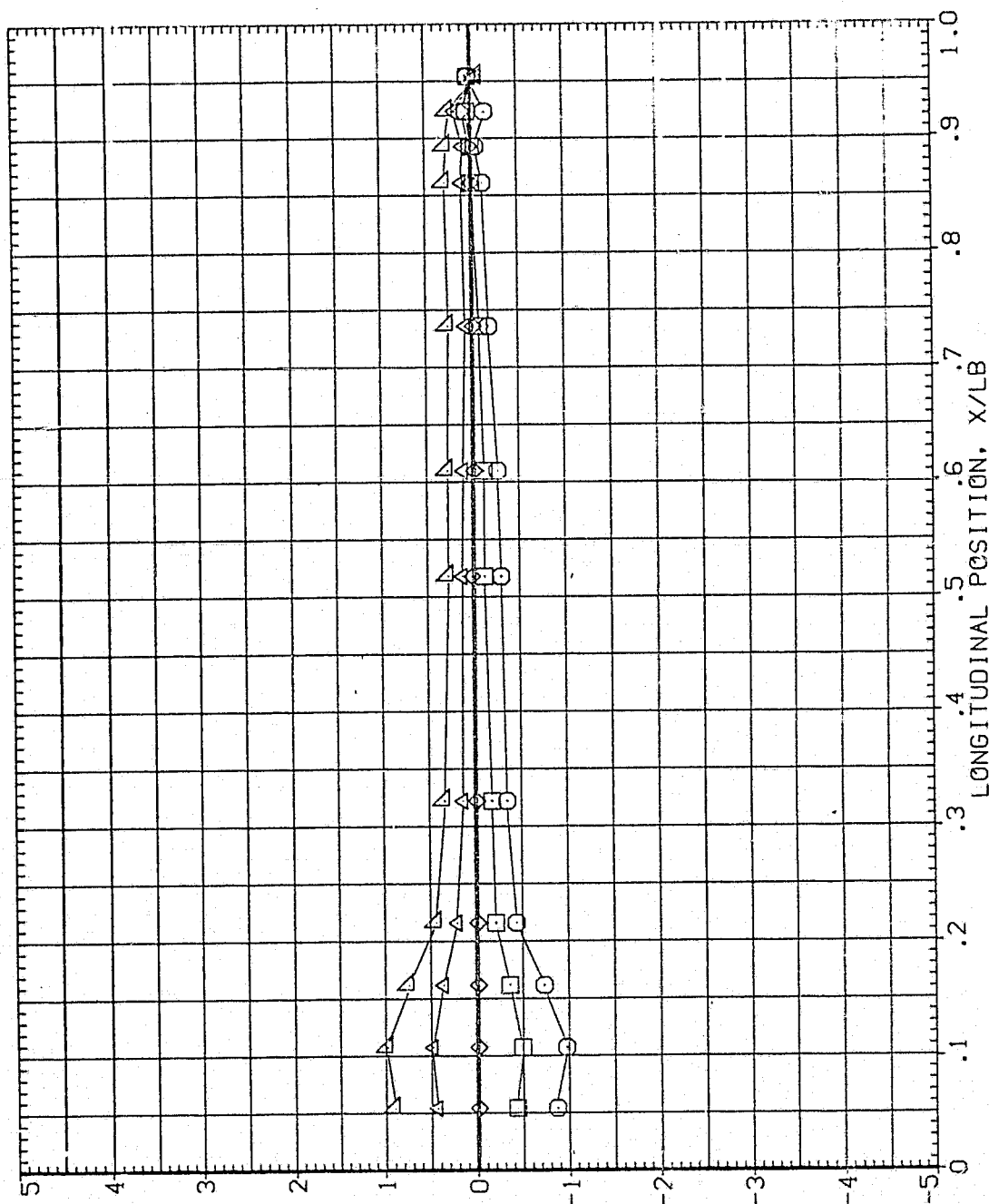


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES
 (A)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01A096)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	12.500	.000	OFFSET	SREF 572.5550
□	16.560	1.000	PHI	LREF 324.0000
◇	20.610	20.000		BREF 324.0000
△	24.660	315.000		XHRP 1086.4000
▽	28.700			YHRP .0000
				ZHRP 400.0000
				SCALE .0030

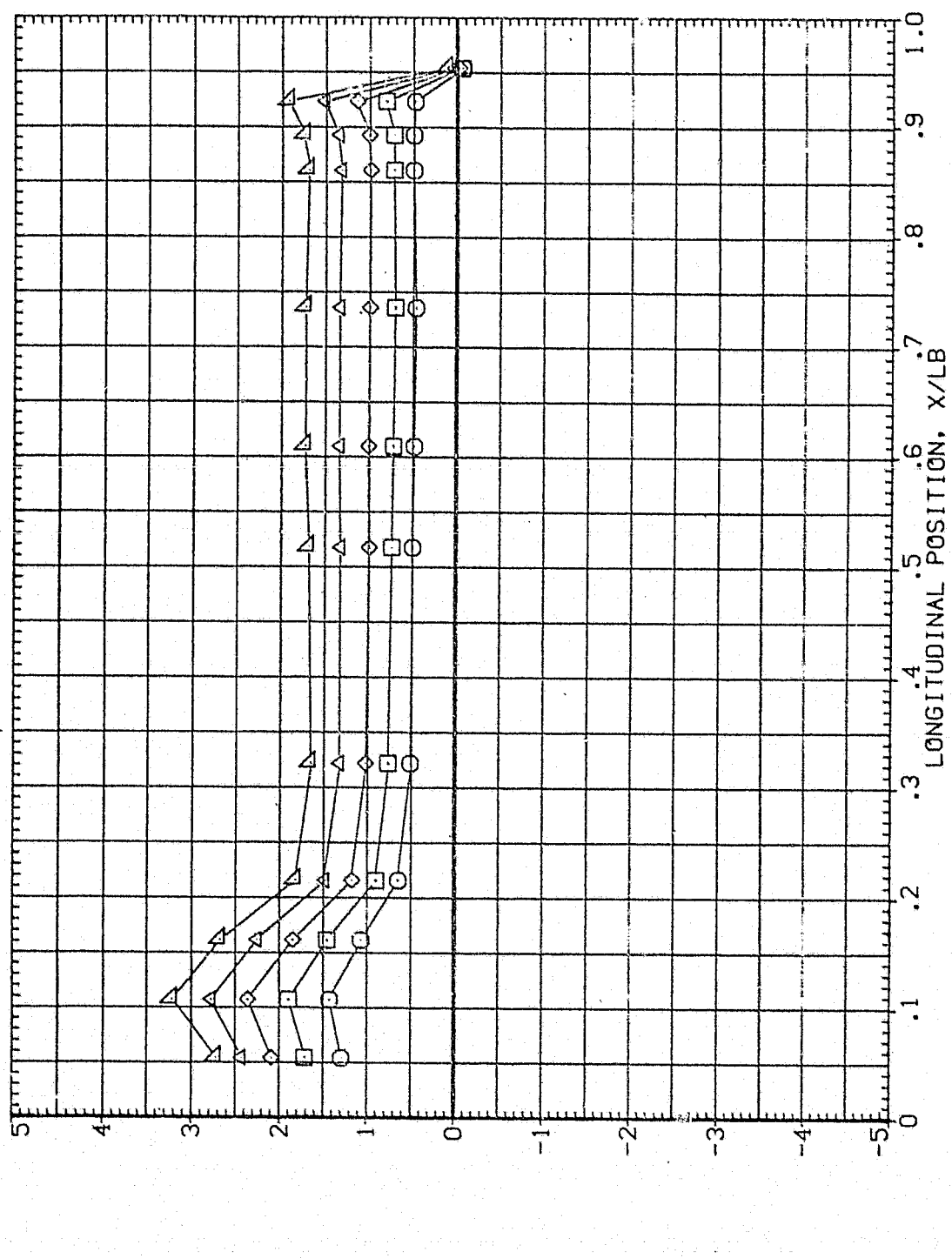


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (Q1A001)

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XHRP 1086.4000 IN. XT
 YHRP .0000 IN. YT
 ZHRP 400.0000 IN. ZT
 SCALE .0030

PARAMETRIC VALUES
 .000 OFFSET
 1.000 PHI

BETA
 MOUNT

ALPHA
 -8.310
 -4.290
 -.280
 3.730
 7.750

LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB

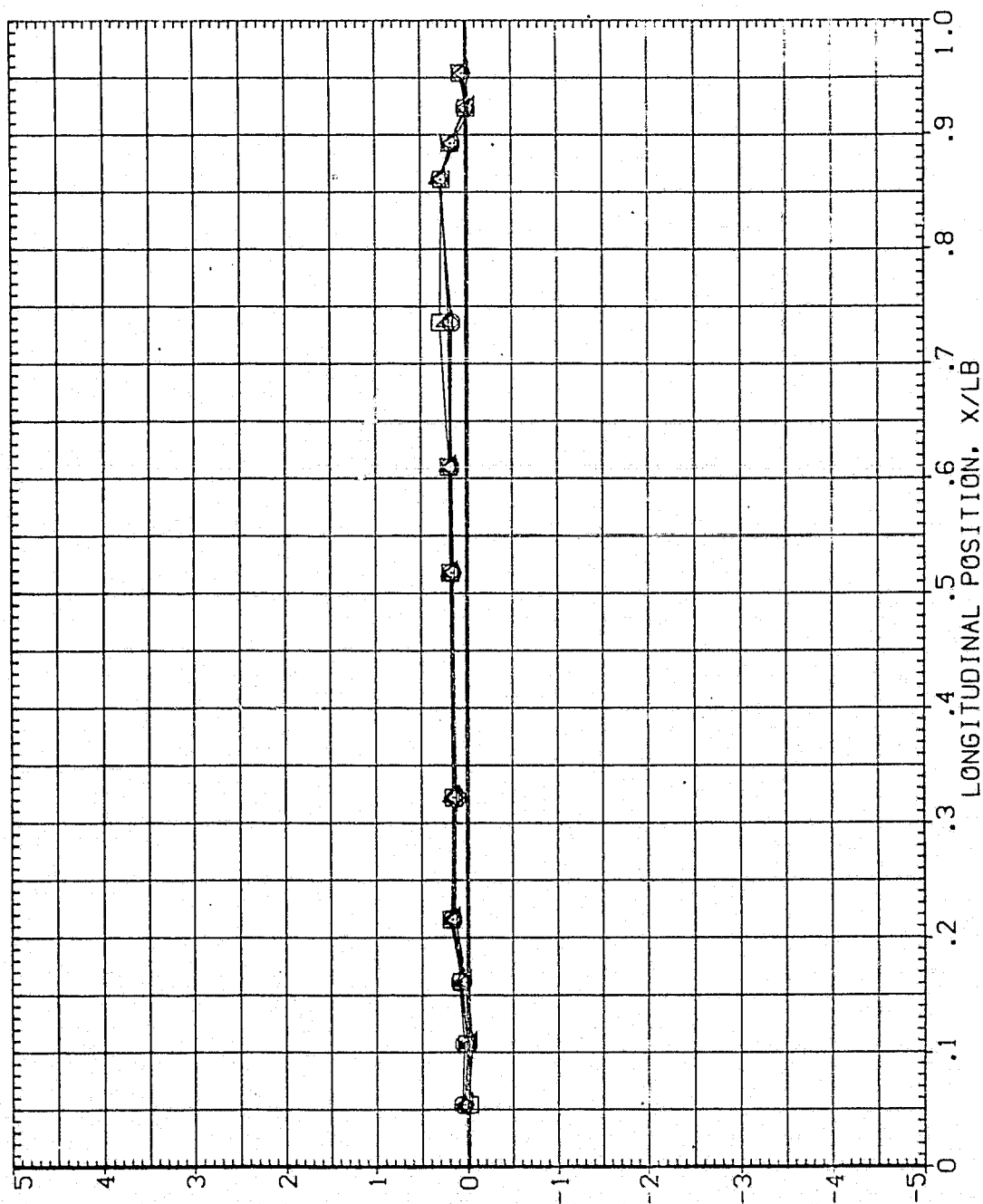


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CA)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01A006)

SYMBOL
 ○
 □
 △
 ▽

ALPHA
 12.450
 16.470
 20.490
 24.510
 28.540

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 1.000
 OFFSET
 PHI

20.000
 .000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XHRP 1086.4000
 YHRP .0000
 ZHRP 400.0000
 SCALE .0030
 SQ. FT
 INCHES
 IN. XT
 IN. YT
 IN. ZT

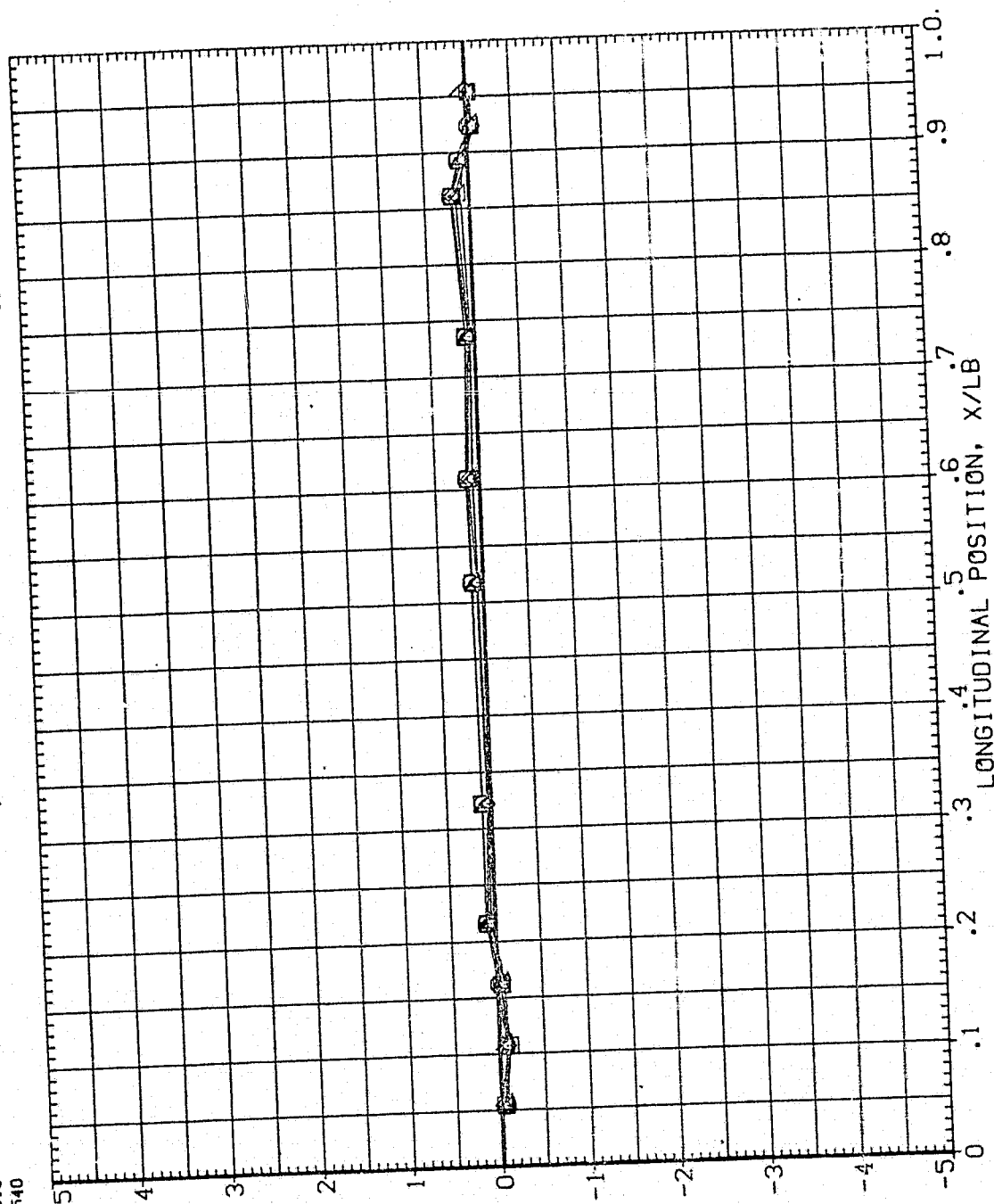


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (Q1A081)

SYMBOL
 ○
 □
 ◇
 ▽

ALPHA
 -8.330
 -4.290
 -.280
 3.730
 7.750

BETA
 .000
 1.000
 .000
 .000
 .000

PHI
 .000
 .000
 .000
 .000
 .000

OFFSET
 .000
 .000
 .000
 .000
 .000

SCALE
 572.5550
 324.0000
 324.0000
 1086.4000
 400.0000
 400.0000
 .0030

REFERENCE INFORMATION
 SREF
 LREF
 BREF
 XMRP
 YMRP
 ZMRP
 50. FT
 INCHES
 INCHES
 IN. XT
 IN. YT
 IN. ZT

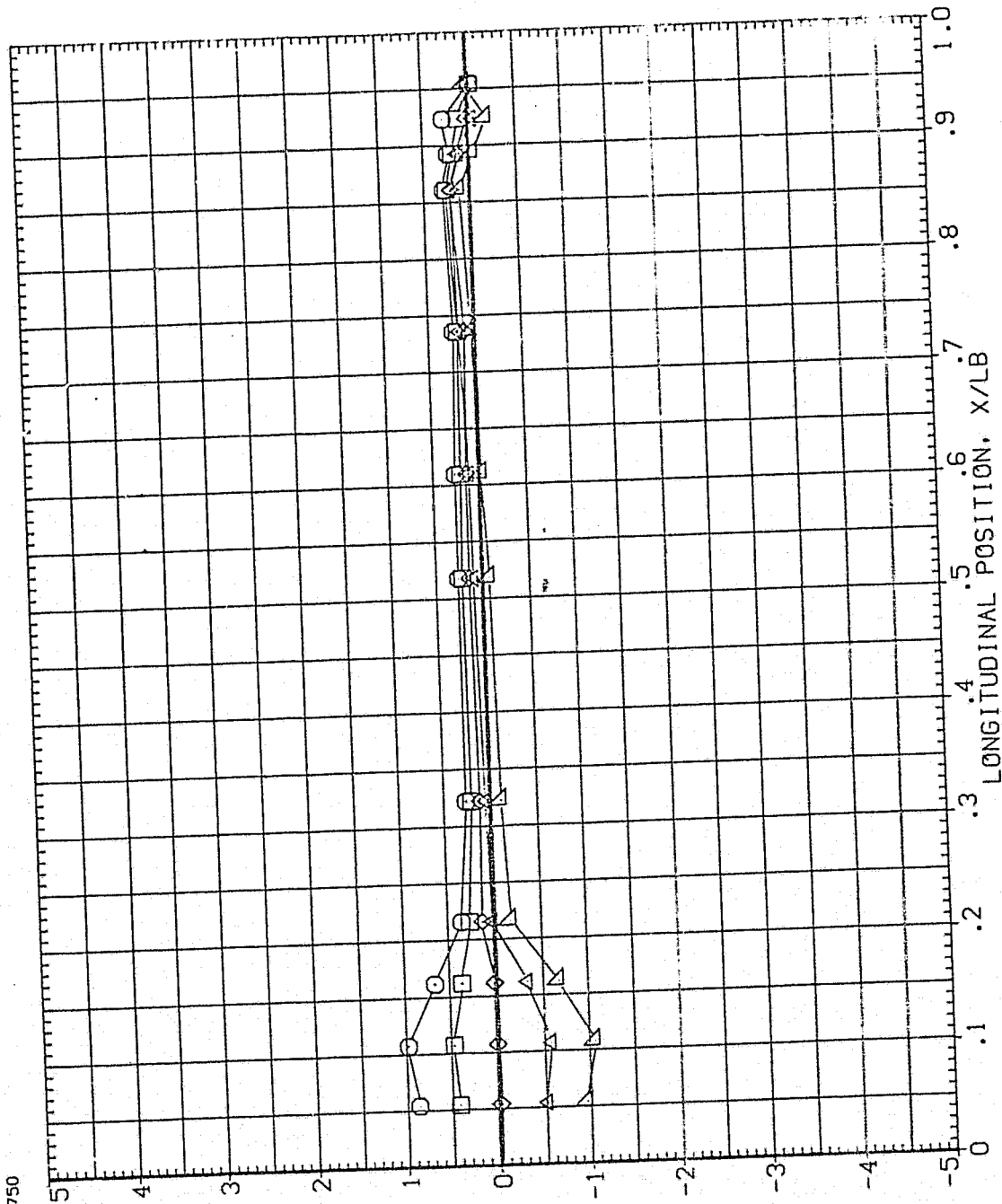


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (Q1A086)

SYMBOL
 ○
 □
 ◇
 △

ALPHA
 12.450
 16.470
 20.490
 24.510
 28.540

BETA
 MOUNT

PARAMETRIC VALUES
 .000 OFFSET
 1.000 PHI

20.000
 45.000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XMRP 1086.4000
 YMRP .0000
 ZMRP 400.0000
 SCALE .0030

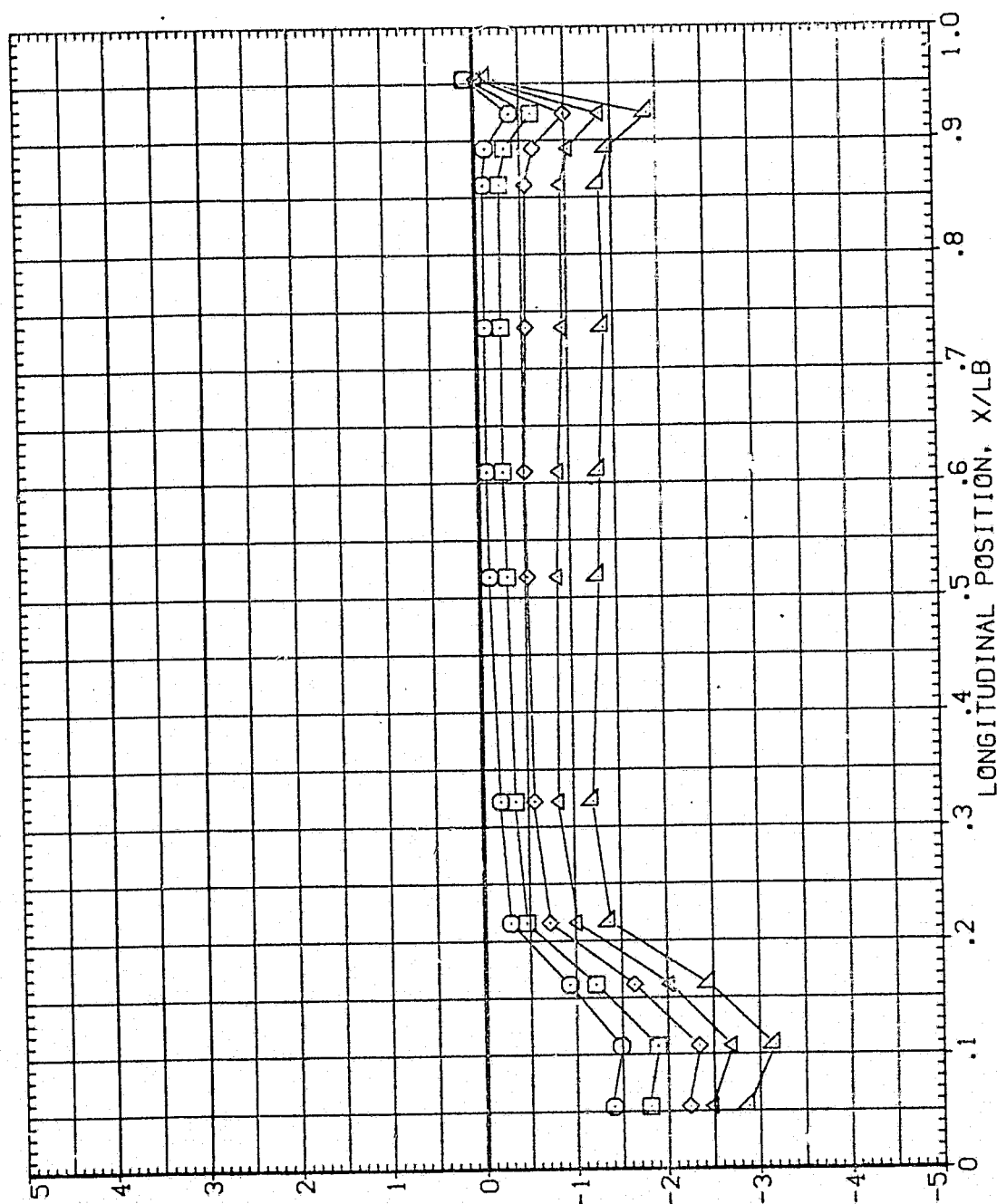


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01A011)

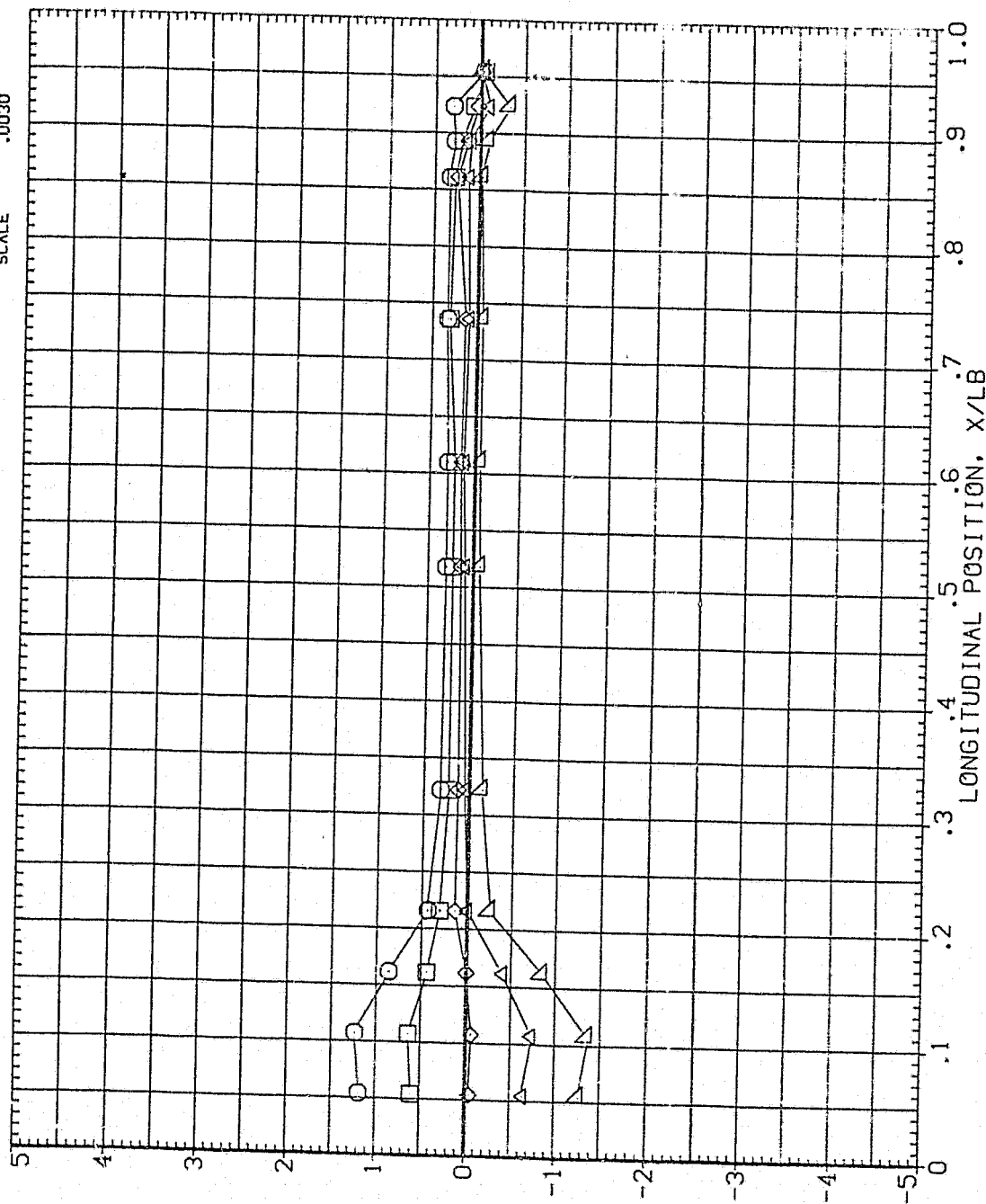
SYMBOL
○ □ ◇ △ ▽

ALPHA
-8.310
-4.290
-.280
3.730
7.750

BETA
MODIT
1.000
1.000
1.000
1.000
1.000

PARAMETRIC VALUES
OFFSET
PHI
90.000
90.000
90.000
90.000
90.000

REFERENCE INFORMATION
SREF 572.5550
LREF 324.0000
BREF 324.0000
XHRP 1086.4000
YHRP .0000
ZHRP 400.0000
IN. XT
IN. YT
IN. ZT
SCALE .0030



LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB

FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CA/MACH = 4.96

SYMBOL
 ○ □ ◇ △

ALPHA
 12.450
 16.470
 20.490
 24.510
 28.540

BETA
 HOUNT

PARAMETRIC VALUES
 .000 1.000 20.000 90.000
 OFFSET PHI

REFERENCE INFORMATION
 SREF 572.5550 SO. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

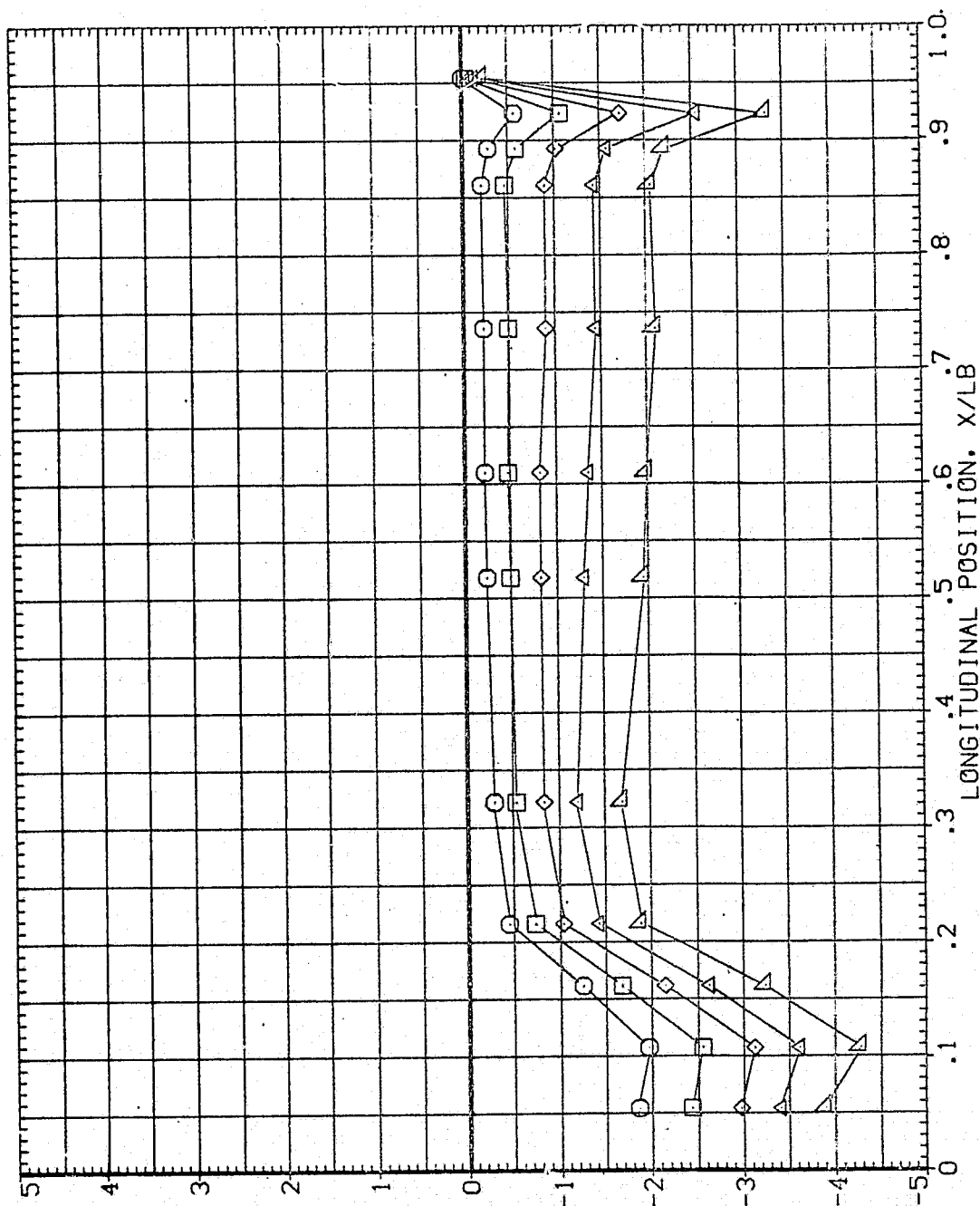


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(M)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (Q1A021)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	-8.310	MOUNT	.000	SREF 572.5550
□	-4.290	PHI	1.000	LREF 324.0000
◇	-1.280	OFFSET	.000	BREF 324.0000
△	3.730	PHI	135.000	XMRP 1086.4000
▽	7.750	PHI		YMRP 400.0000
				ZMRP 400.0000
				SCALE .0030

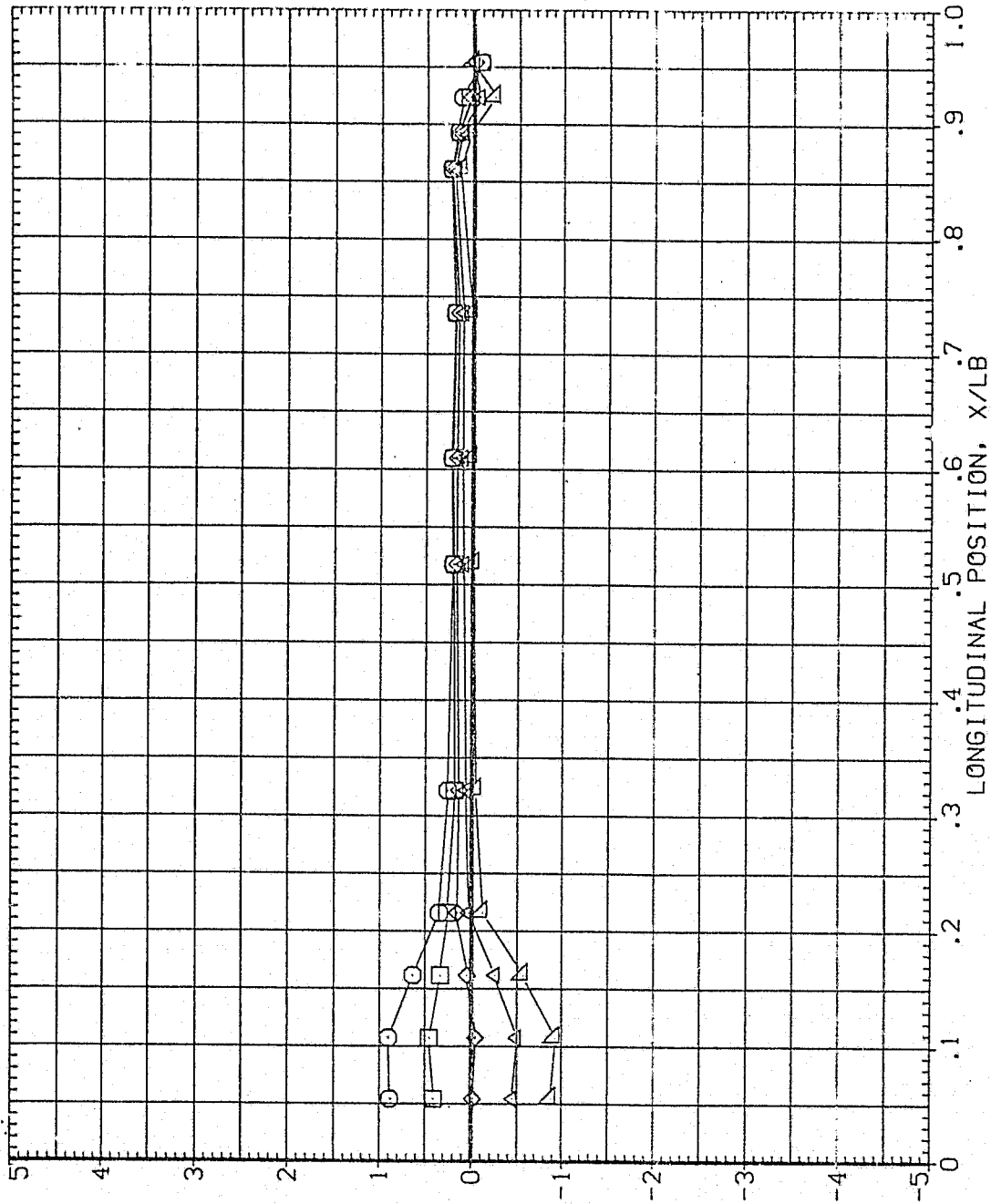


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

SYMBOL
□
◇
△
▽

ALPHA
12.450
16.450
20.490
24.510
28.510

BETA
HOUNT
1.000
20.000
135.000
PHI

PARAMETRIC VALUES
.000
1.000
20.000
135.000
PHI

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. XT
YMRP .0000 IN. YT
ZMRP 400.0000 IN. ZT
SCALE .0030

LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB)

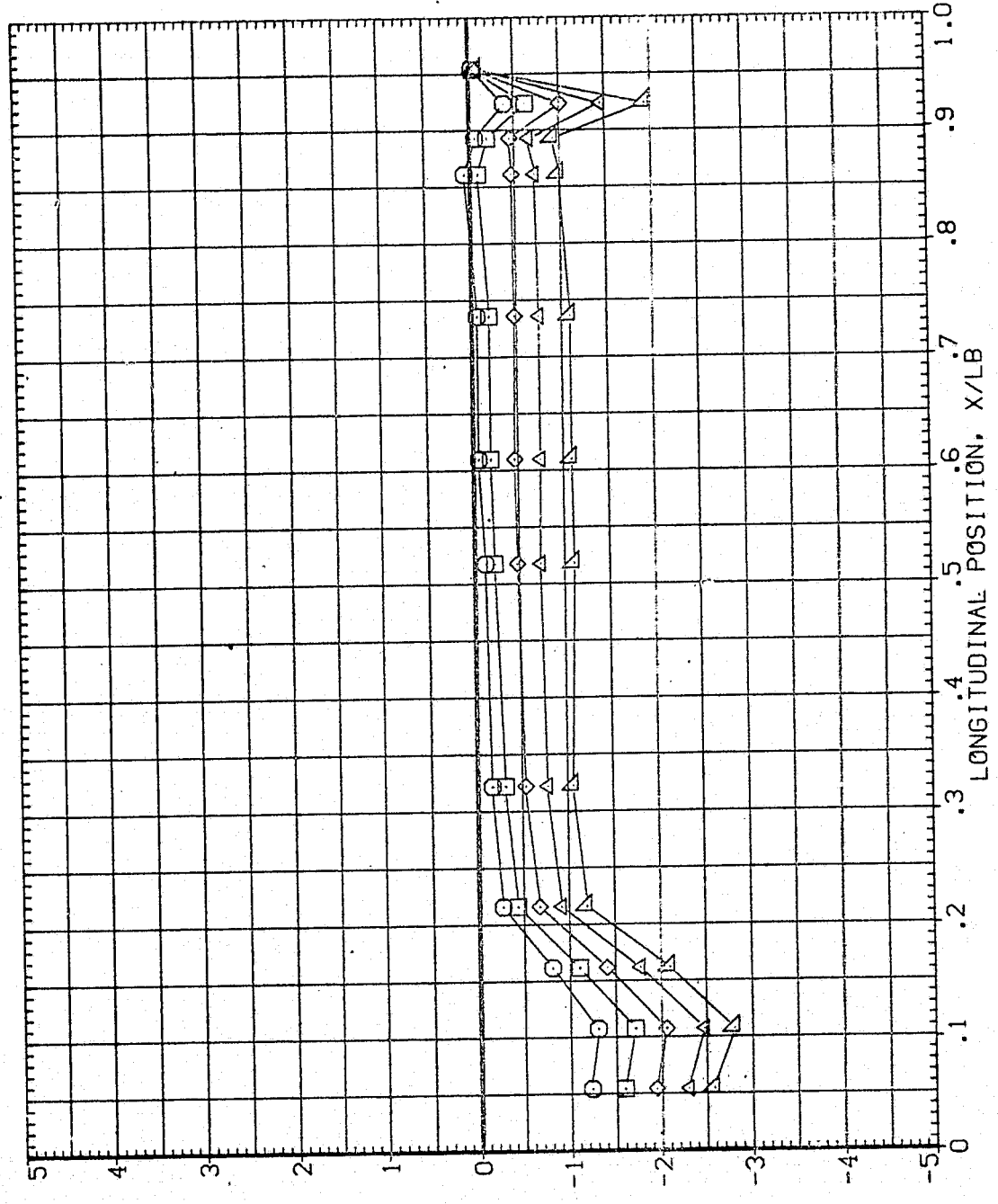


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CA)MACH = 4.96

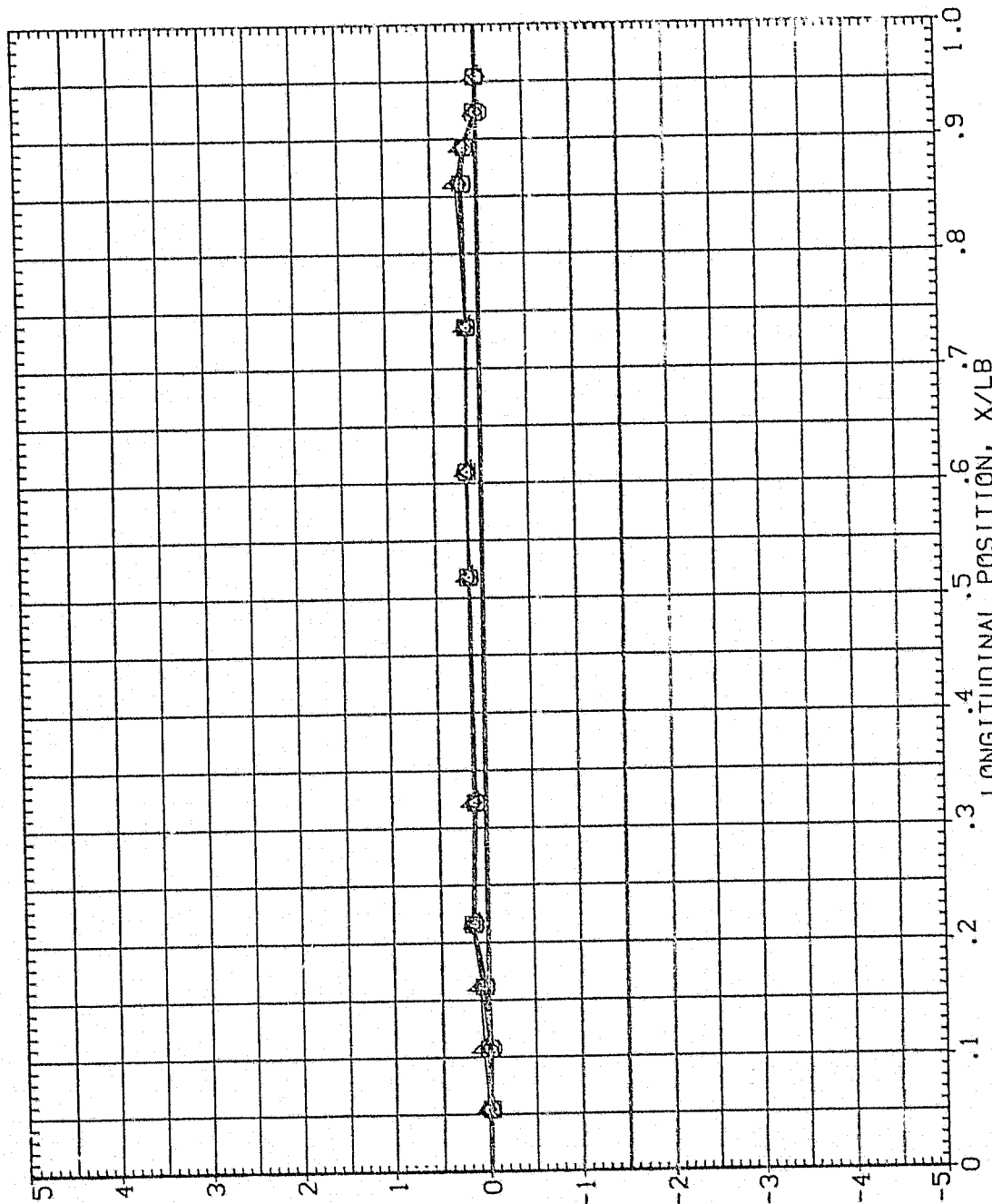
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (Q1A031)

SYMBOL ALPHA BETA MOUNT

REFERENCE INFORMATION

PARAMETRIC VALUES

SREF 572.5550
LREF 324.0000
BREF 324.0000
XMRP 1086.4000
YMRP .0000
ZMRP 400.0000
SCALE .0030



LOCAL SIDE FORCE COEFFICIENT, $C_{YM}/D(X/LB)$

FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (Q1A036)

SYMBOL	PARAMETRIC VALUES			REFERENCE INFORMATION		
	ALPHA	BETA	OFFSET	SREF	572.5550	SQ. FT
○	12.450	0.000	PHI	LREF	324.0000	INCHES
□	16.470	1.000	PHI	BREF	324.0000	INCHES
◇	20.490			XMRP	1086.4000	IN. XT
△	24.510			YMRP	400.0000	IN. YT
▽	28.560			ZMRP	400.0000	IN. ZT
				SCALE	.0030	

LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB

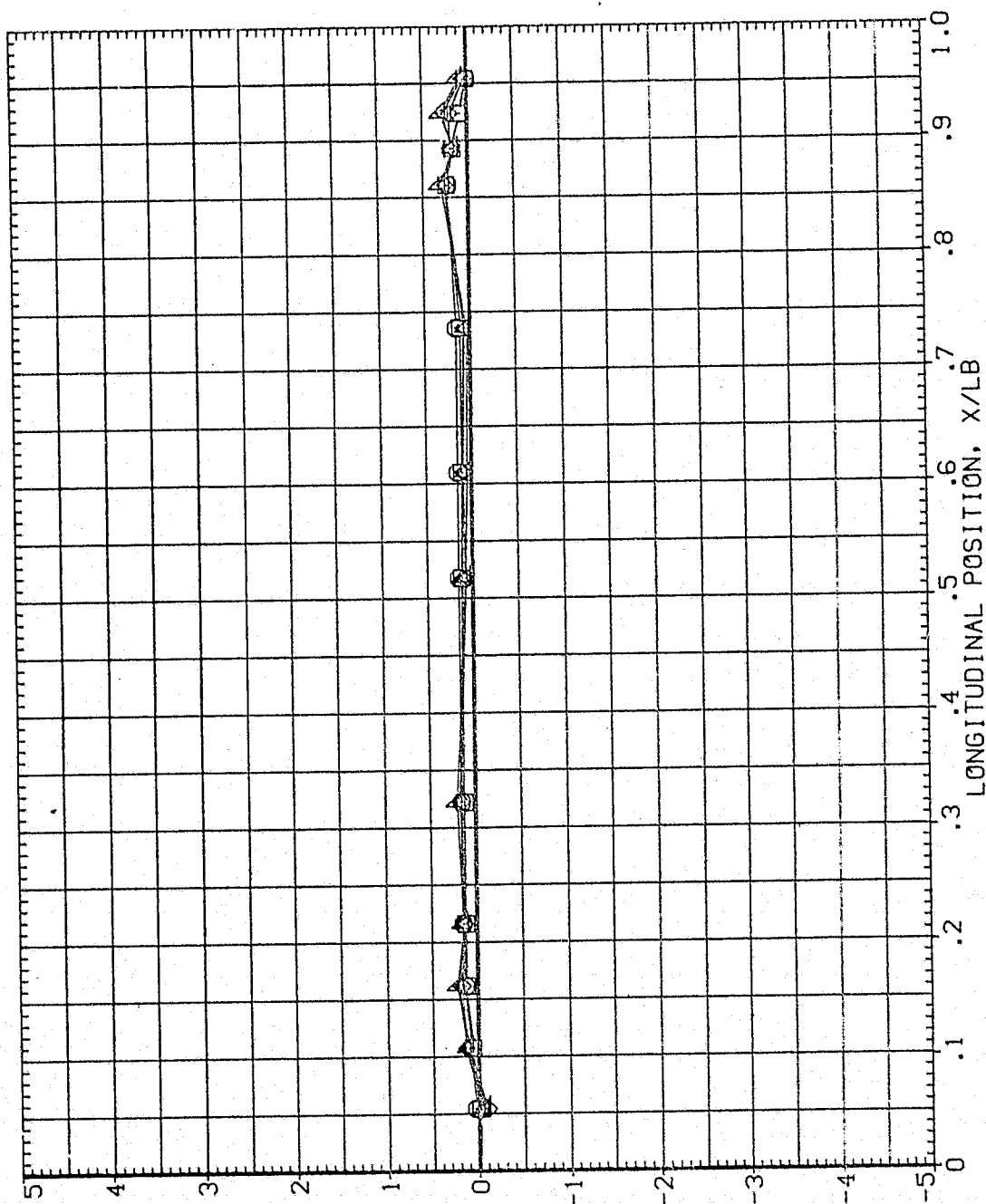


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

CA)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (Q1A041)

SYMBOL
 ▽
 ◇
 □
 ○

ALPHA
 -8.310
 -4.290
 -.280
 3.730
 7.750

BETA
 HEIGHT

PARAMETRIC VALUES
 .000
 .000
 1.000
 PHI

.000
 225.000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XHRP 1086.4000
 YHRP .0000
 ZHRP 400.0000
 SCALE .0030

LOCAL SIDE FORCE COEFFICIENT, $DC_{YM}/DC_{X/LB}$

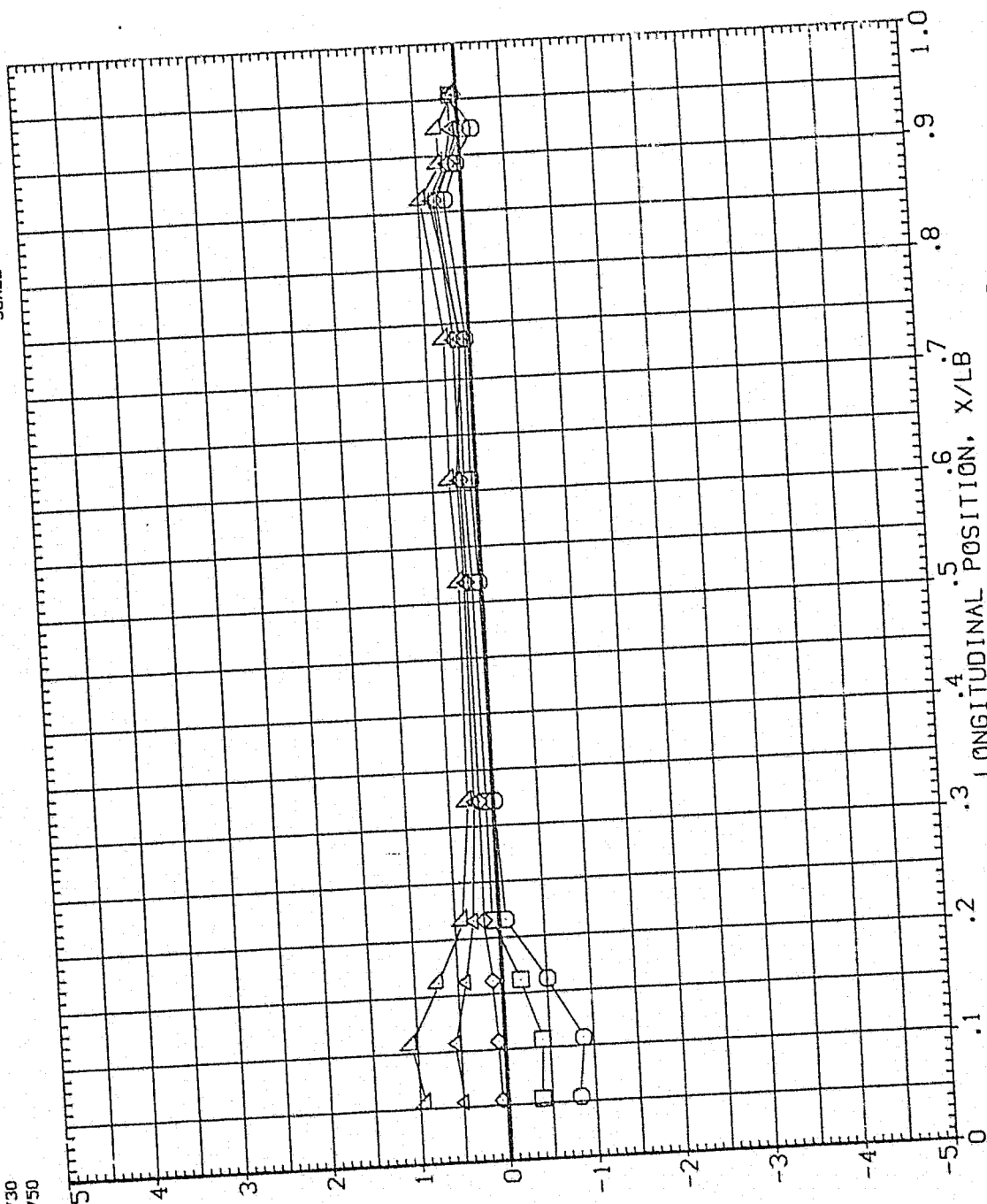


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	12.450	0.000	OFFSET	SREF 572.5550
□	16.450	1.000	PHI	LREF 324.0000
◇	20.490	1.000	PHI	BREF 324.0000
△	24.510	1.000	PHI	XHRP 1086.4000
▽	28.540	1.000	PHI	ZHRP 400.0000

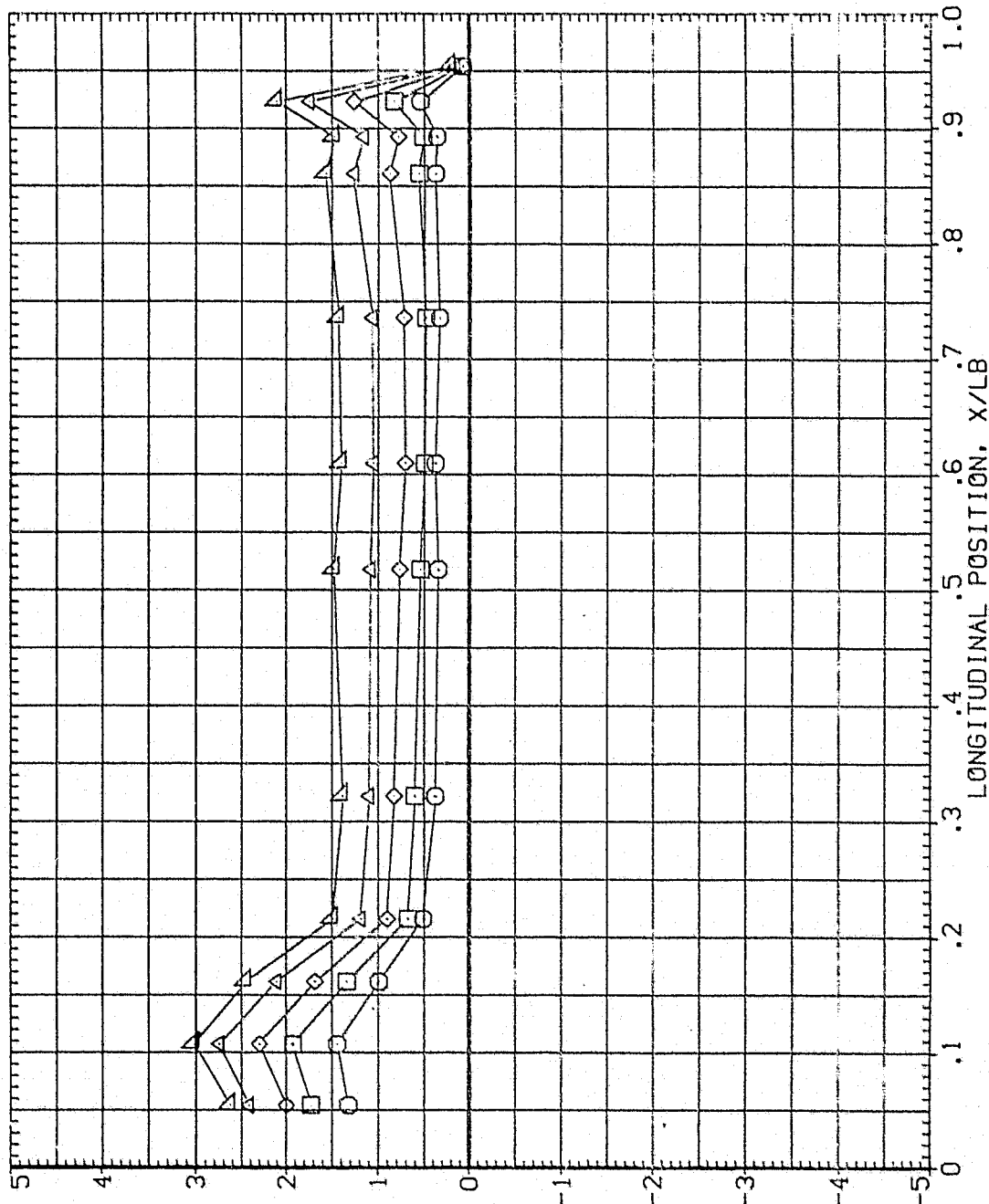


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (01A051)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	-8.310	0.000	OFFSET	SREF 572.5550
□	-4.290	1.000	PHI	LREF 324.0000
◇	-1.280	270.000		BREF 324.0000
△	3.750			XMRP 1086.4000
▽	7.750			YMRP 400.0000
				ZMRP 400.0000
				SCALE .0030

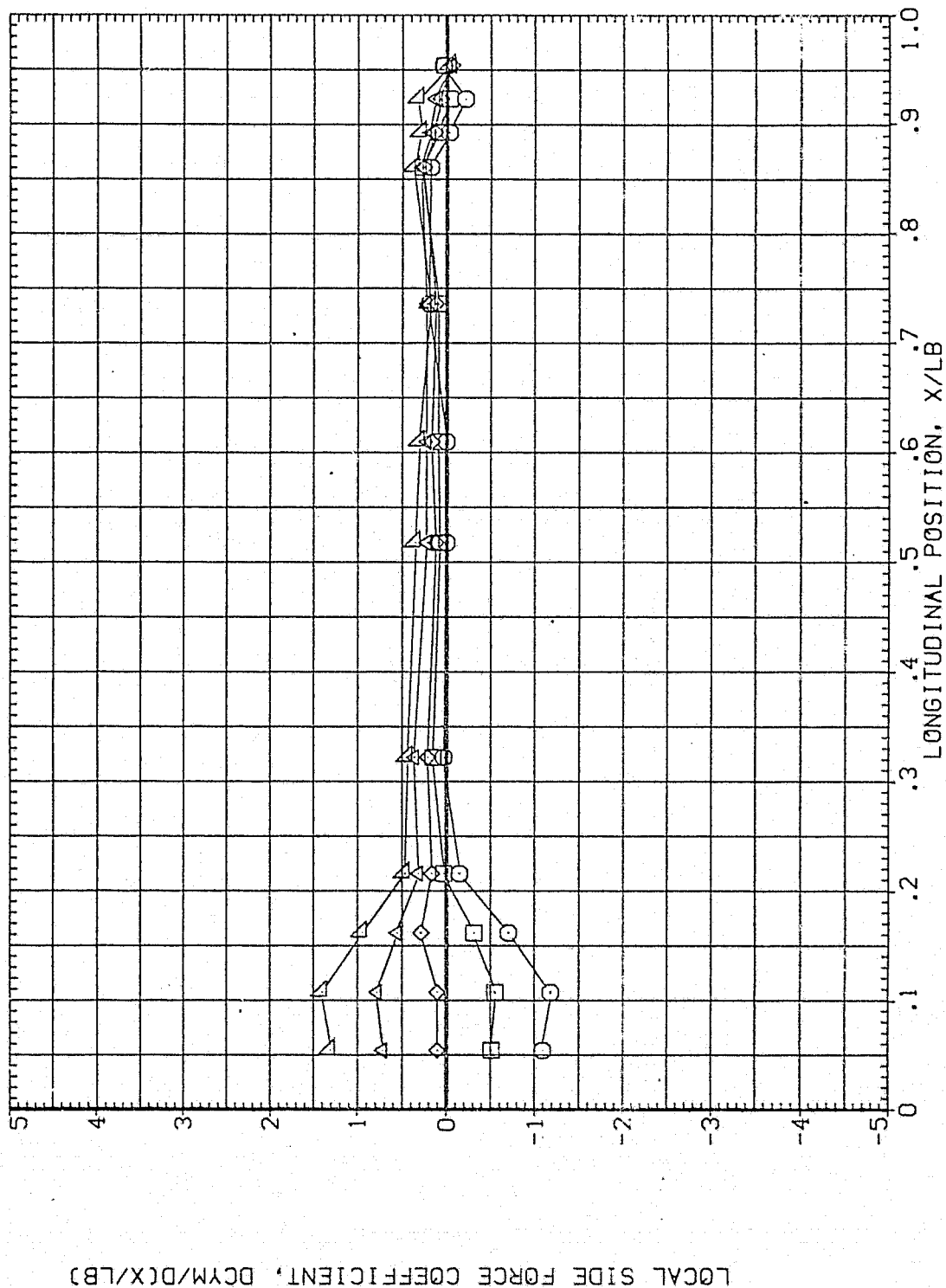


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XHRP 1086.4000 IN. XI
 YHRP .0000 IN. YI
 ZHRP 400.0000 IN. ZI
 SCALE .0030

PARAMETRIC VALUES
 .000 OFFSET 20.000
 1.000 PHI 270.000

ALPHA
 12.450
 16.450
 20.490
 24.530
 28.540

BETA
 MOUNT

SYMBOL
 ○
 □
 ◇
 △

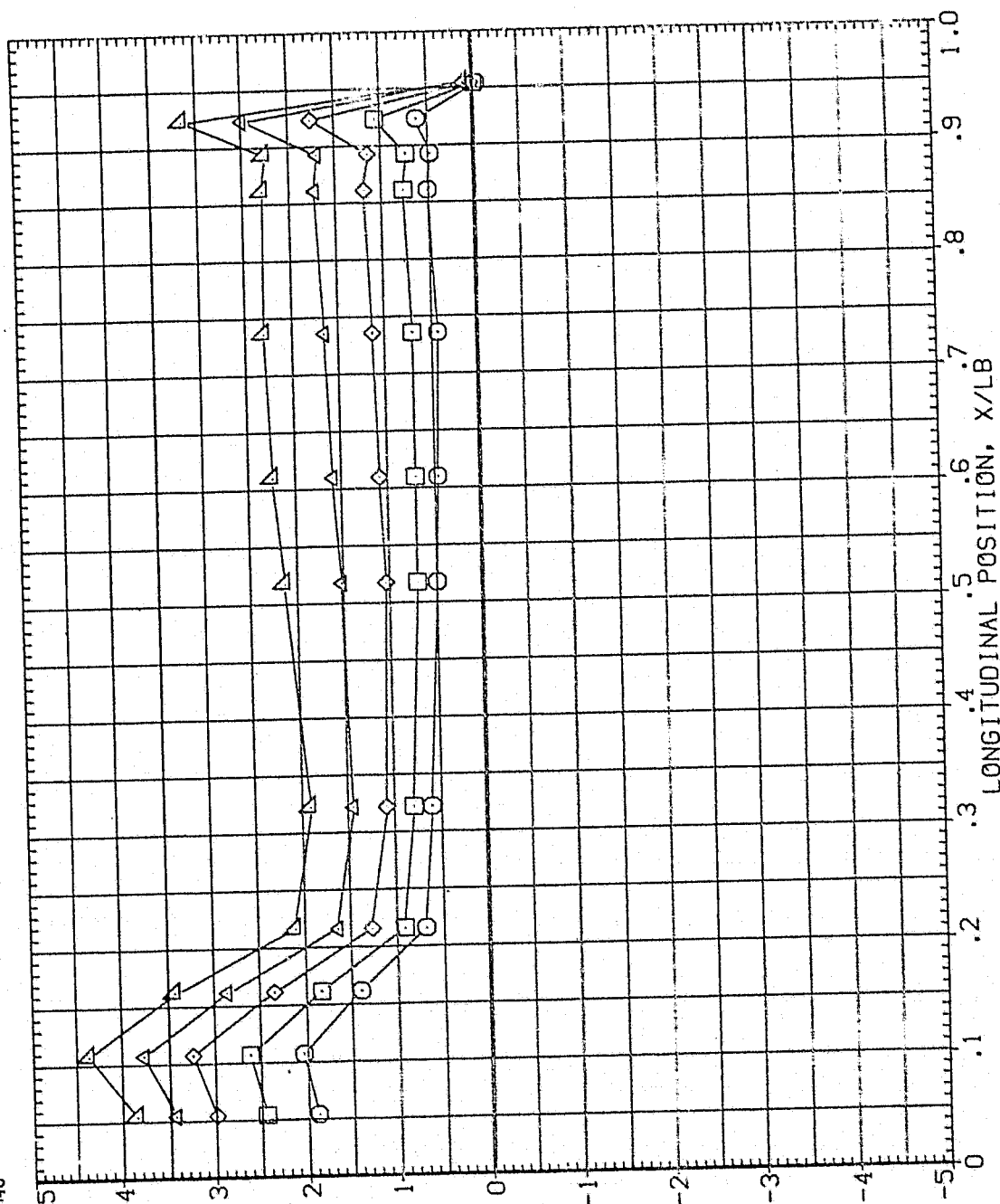


FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

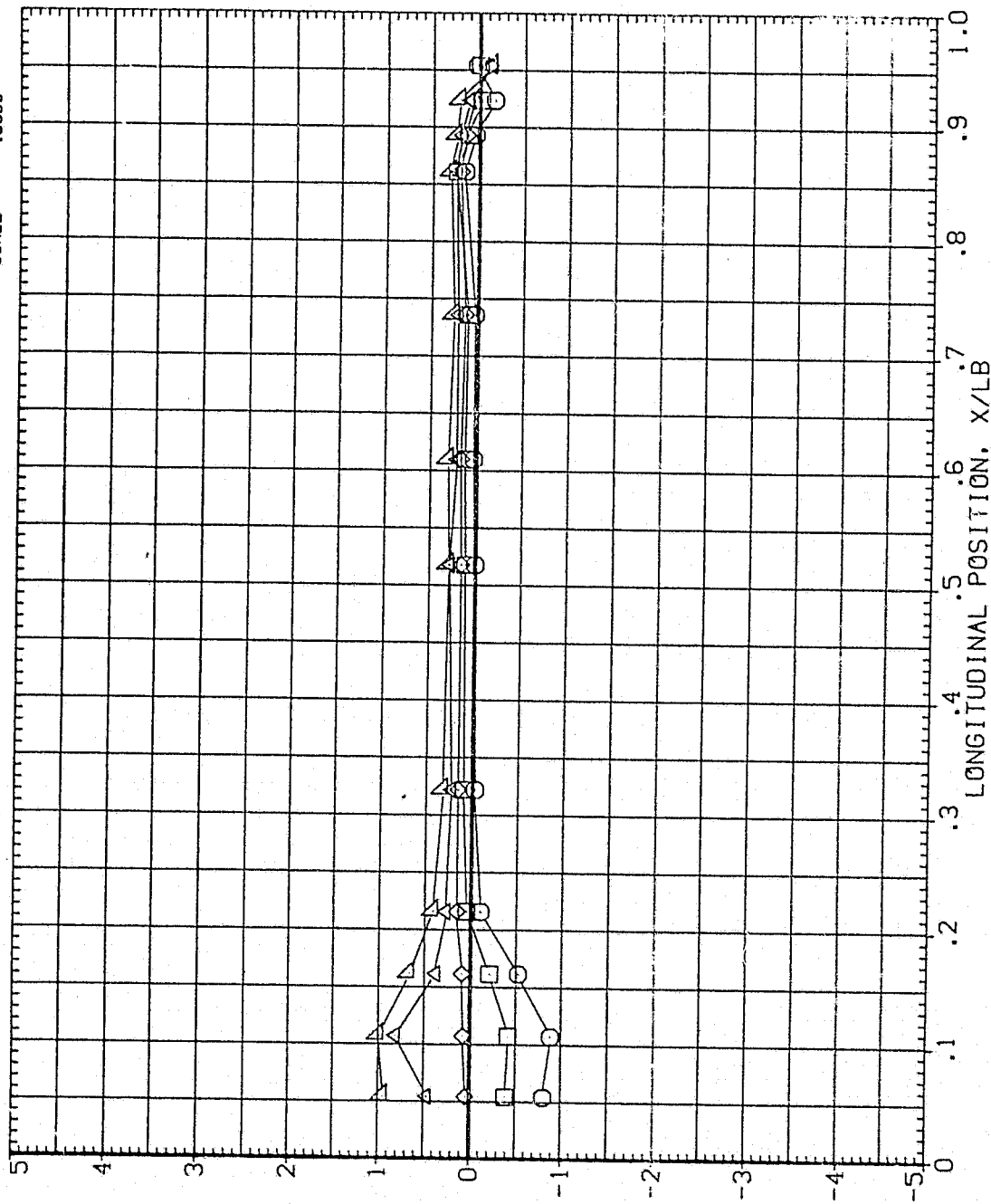
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (Q1A091)

SYMBOL

ALPHA
-8.310
-4.290
-2.280
3.730
7.750

PARAMETRIC VALUES
BETA
MOUNT
OFFSET
PHI
.000
1.000
315.000
.000

REFERENCE INFORMATION
SREF 572.5550
LREF 324.0000
BREF 324.0000
XMRP 1086.4000
YMRP 400.0000
ZMRP 400.0000
SCALE .0030
SO. FT
INCHES
INCHES
IN. XT
IN. YT
IN. ZT



LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB

FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(MACH = 4.96)

SYMBOL
 ○
 □
 ◇
 △

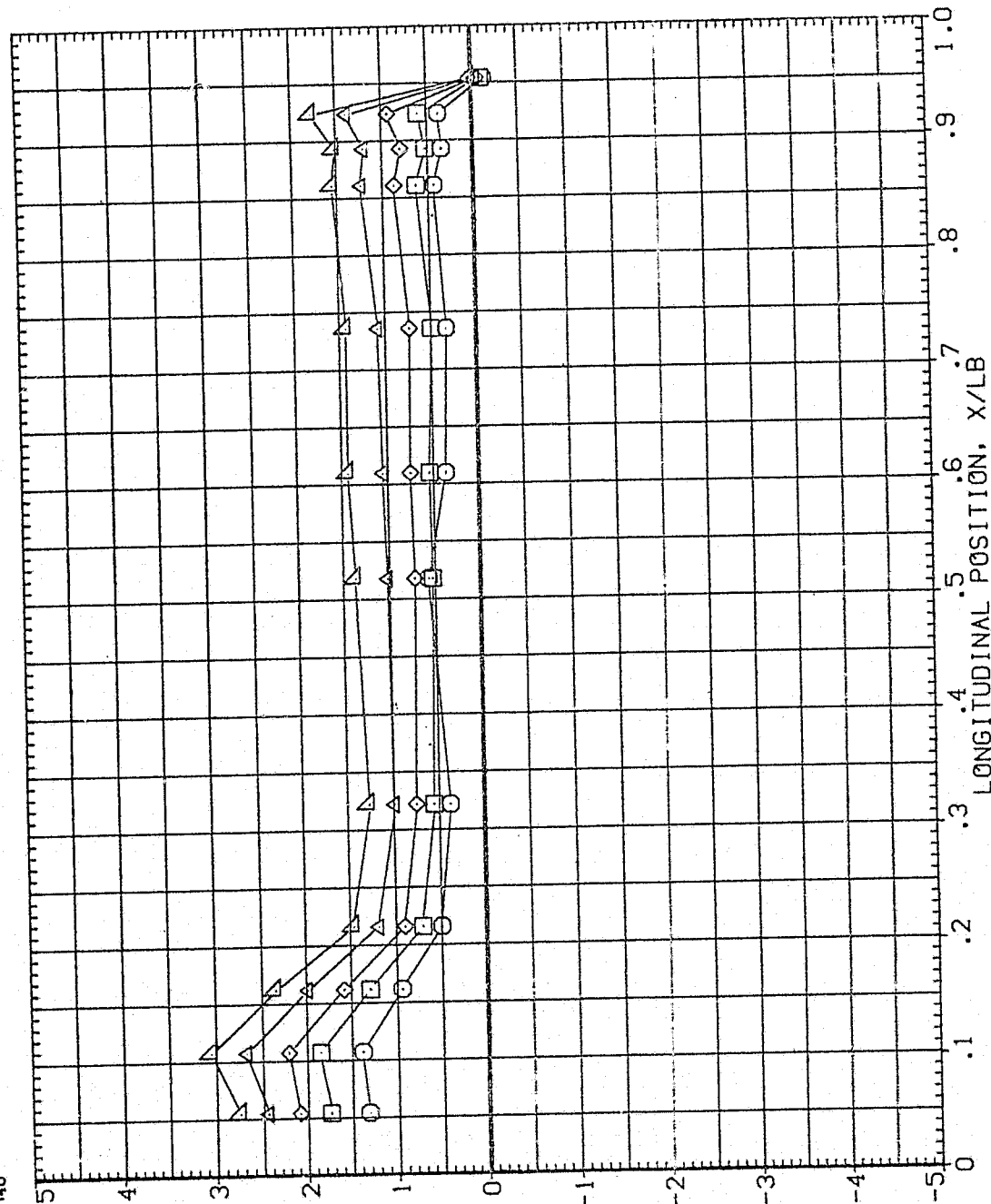
ALPHA
 12.430
 16.470
 20.490
 24.510
 28.540

BETA
 MOUNT

PARAMETRIC VALUES
 .000 OFFSET
 1.000 PHI

20.000
 315.000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XMRP 1086.4000
 YMRP .0000
 ZMRP 400.0000
 SCALE .0030
 SO. FT
 INCHES
 IN. XT
 IN. YT
 IN. ZT



LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB

FIG. 7 LOCAL SIDE FORCE DISTRIBUTION - T1 WITH PROTUBERANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL	PARAMETRIC VALUES		
	THETA	ALPHA	MACH
○	.000	51.110	1.960
□	14.000		
◇	24.000		
		BETA	60.000
		HEIGHT	.000
		PHI	.000

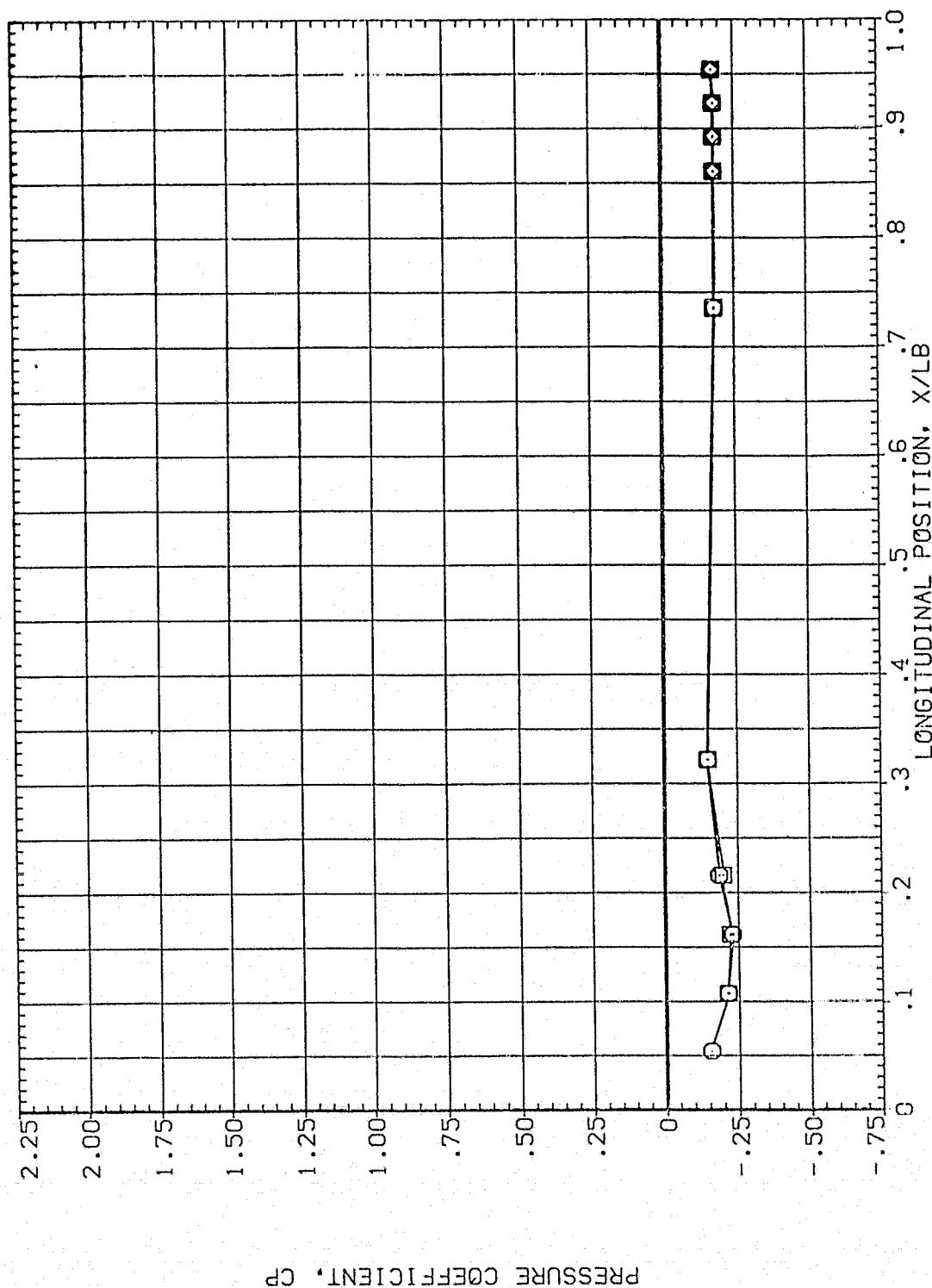


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	45.000	51.110	51.110	51.110	1.960	1.960	BETA	OFFSET	PHI	60.000
○	67.500						Mount	2.000		.000
◇	90.000									

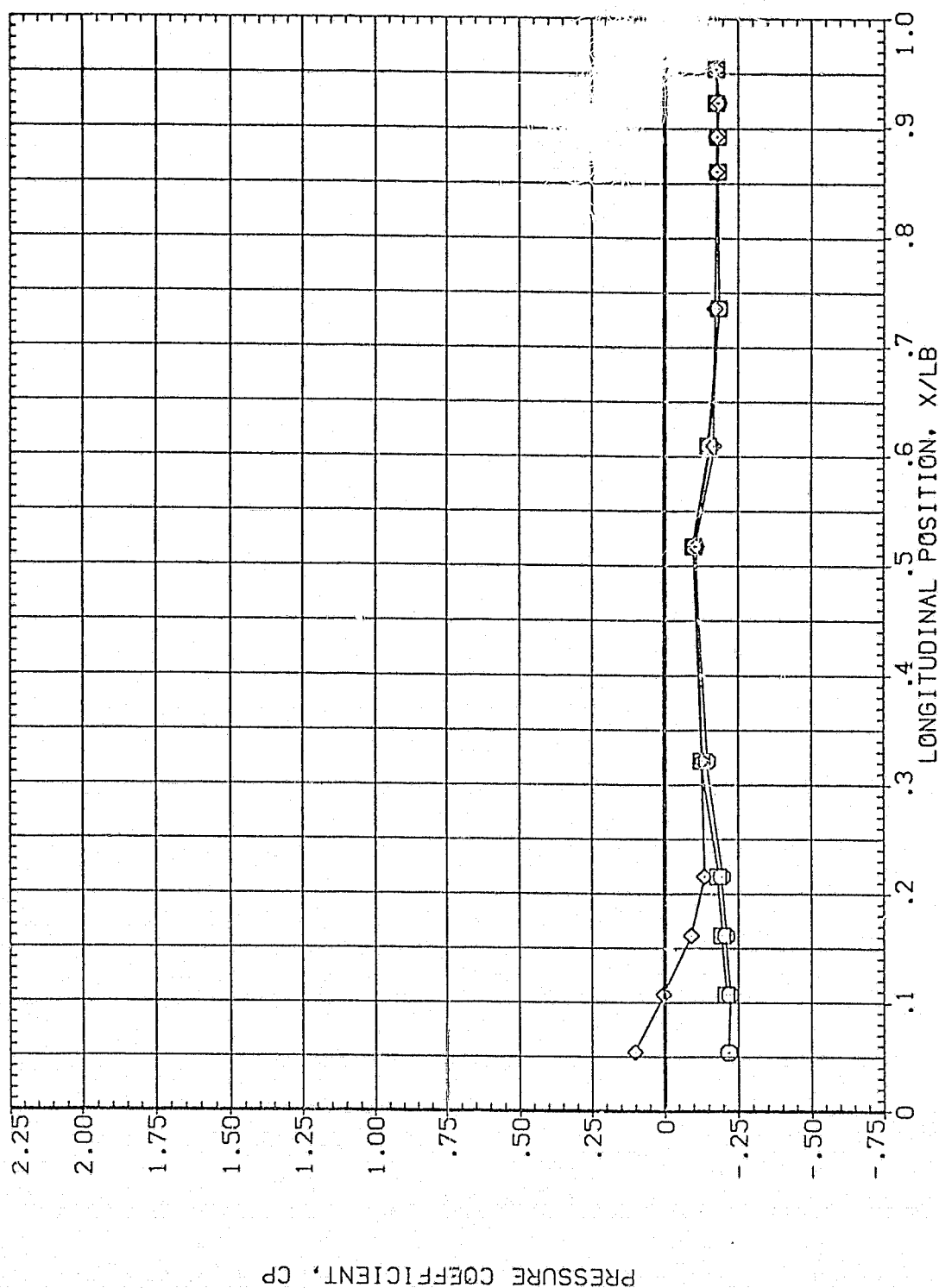


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	51.110	1.960	2.000	.000	.000
□	135.000					
◇	157.500					

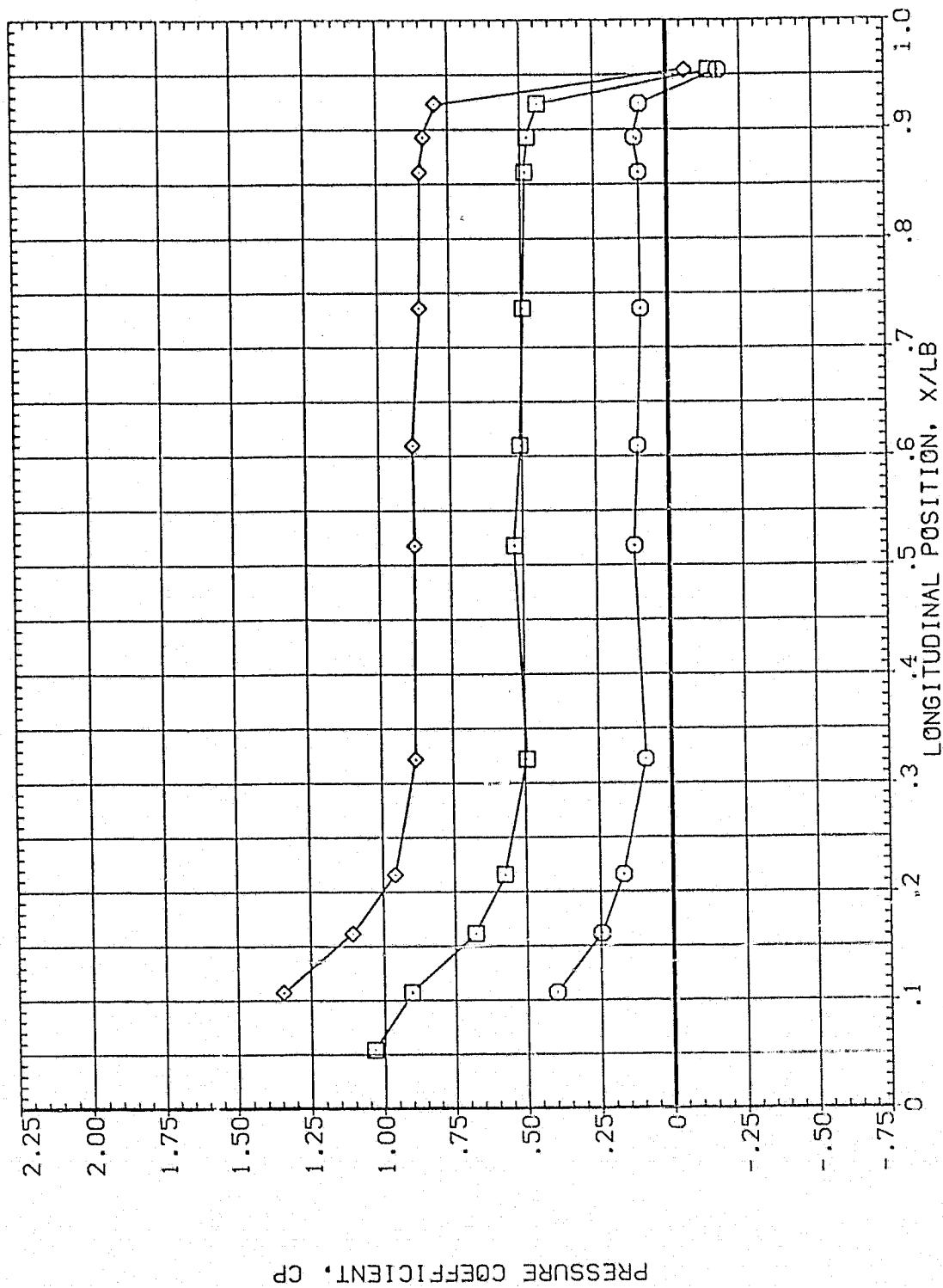


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES
○	180.000	51.110	1.960	BETA .000 OFFSET 60.000
□	202.500			PHI 2.000 .000
◇	225.000			

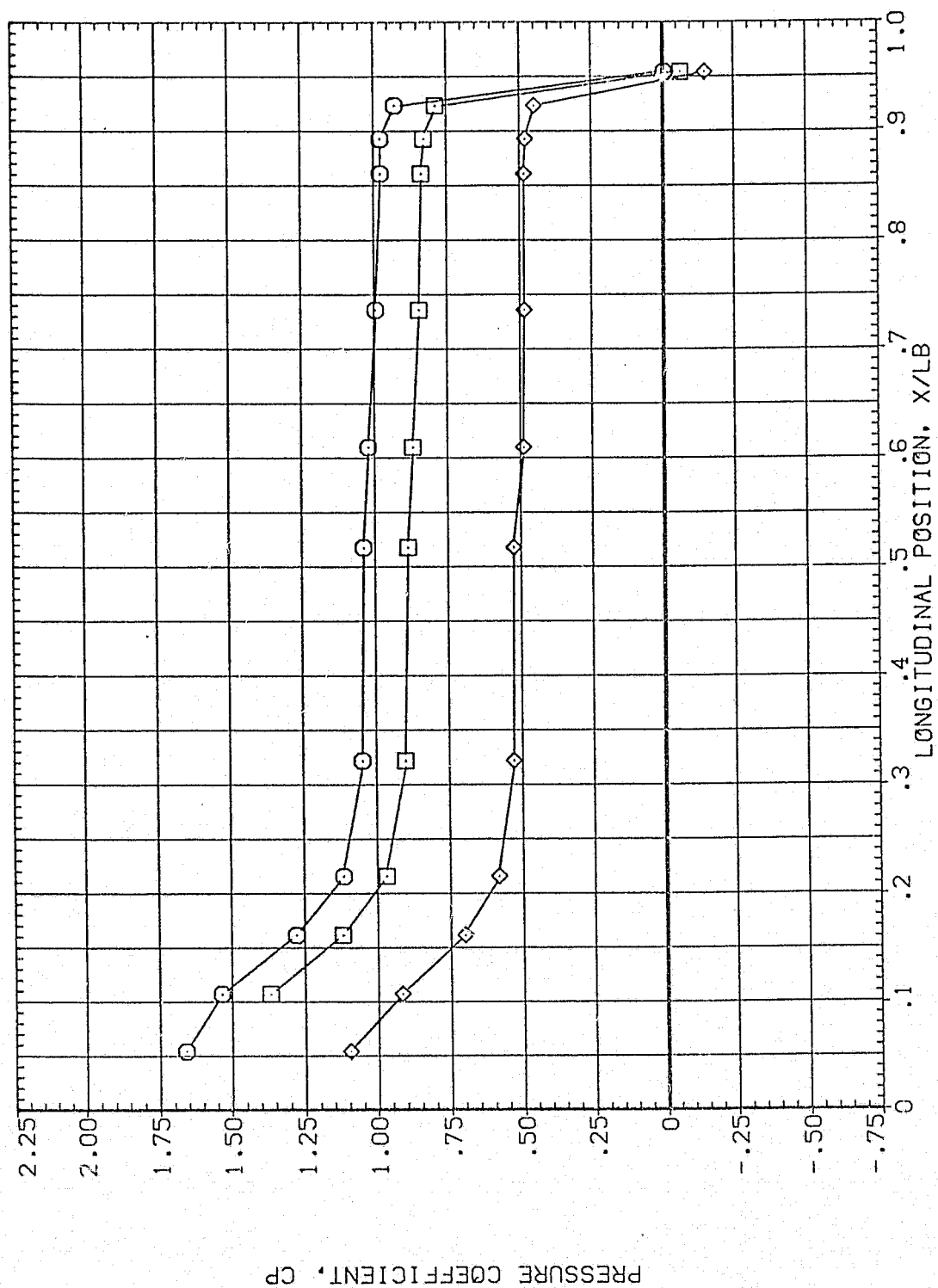


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	51.110	1.960	MOUNT	.000
□	270.000				2.000
◇	292.500				60.000
					PHI
					.000

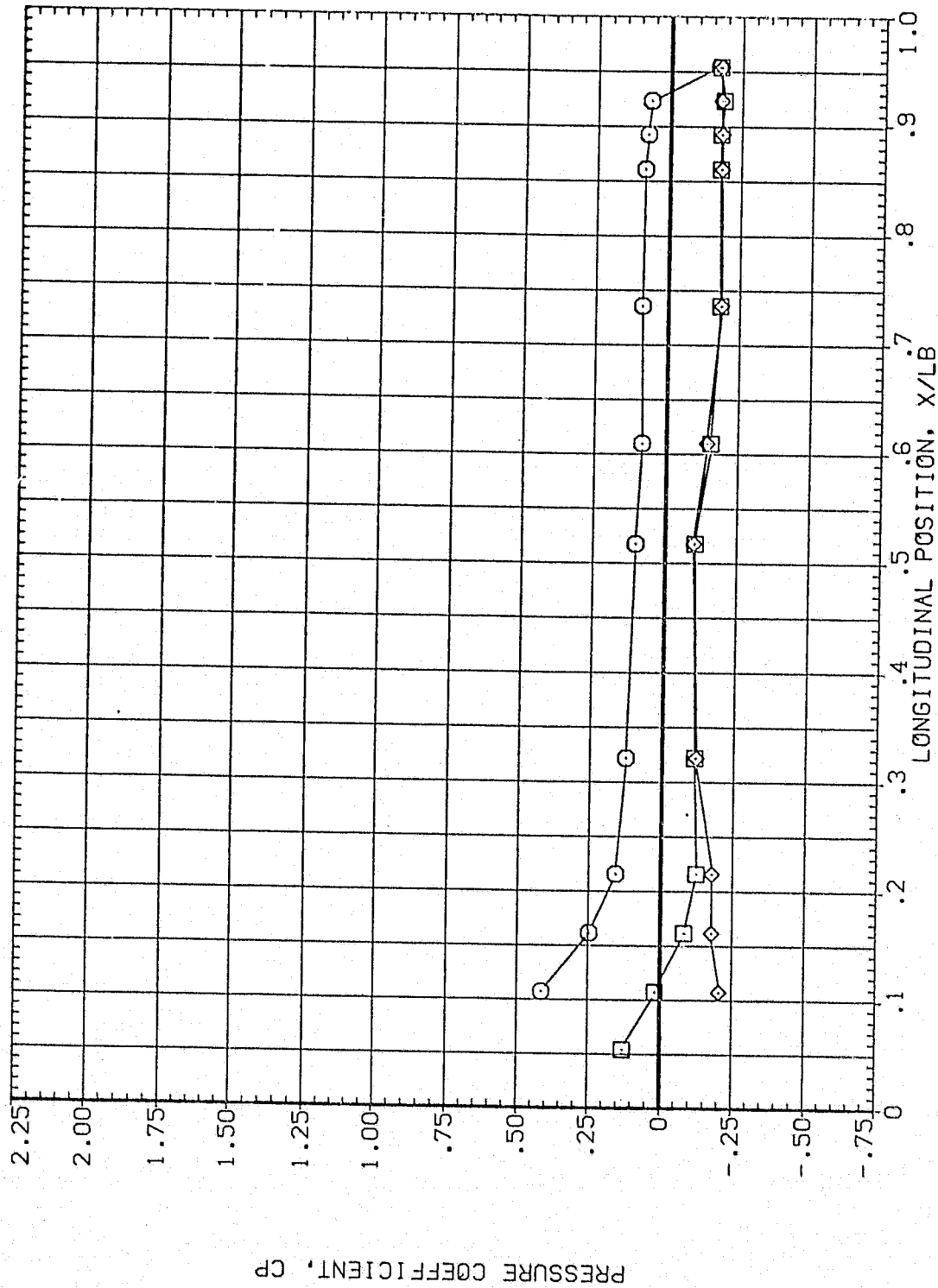


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL THETA ALPHA MACH
 O 315.000 51.110 1.960
 □ 326.000
 ◇ 345.000

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 60.000
 .000

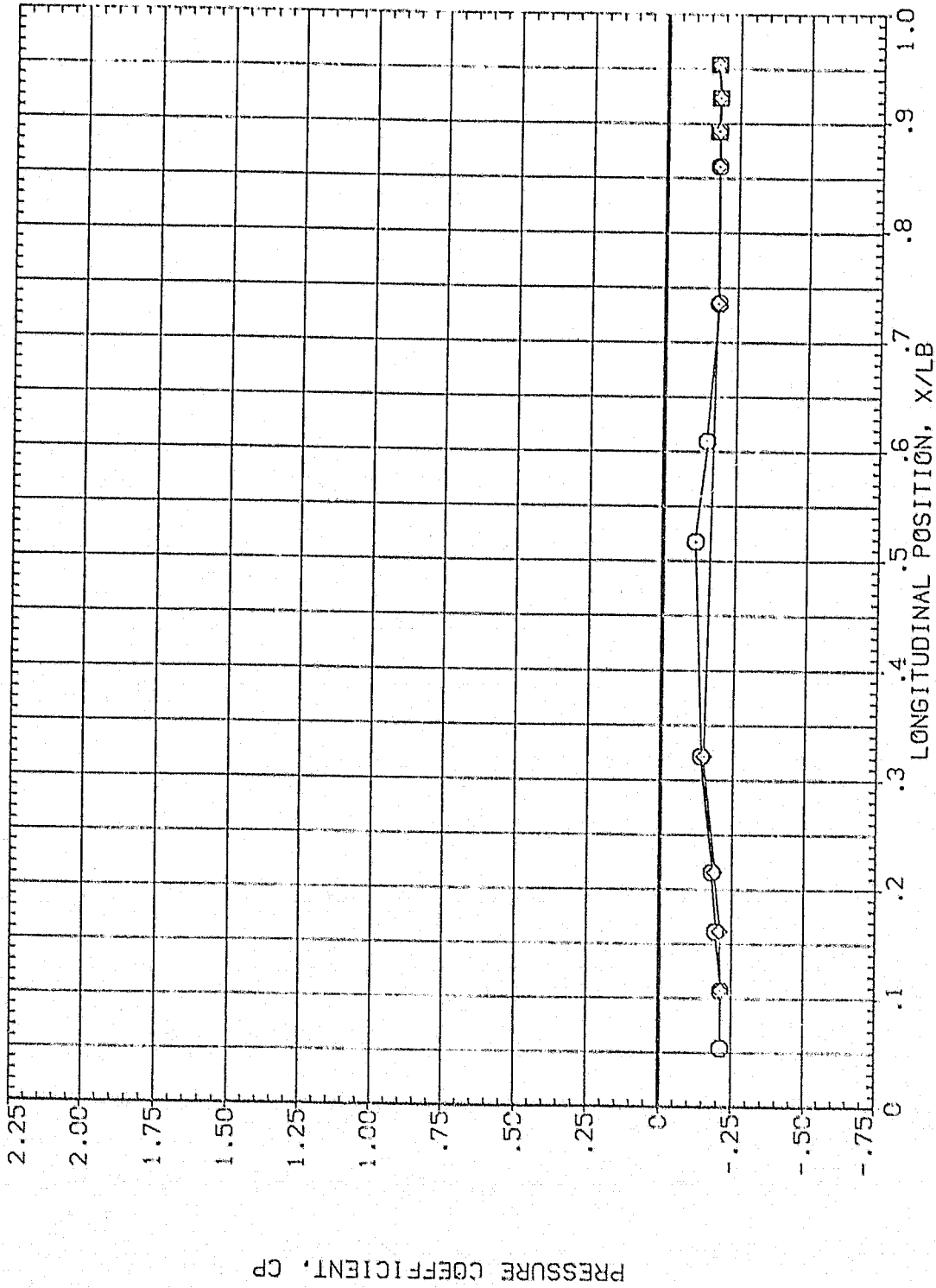


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
 ORIGINAL PAGE IS POOR

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL THETA ALPHA MACH
 O .000 54.110 1.960
 □ 14.000
 ◇ 24.000

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 60.000
 .000

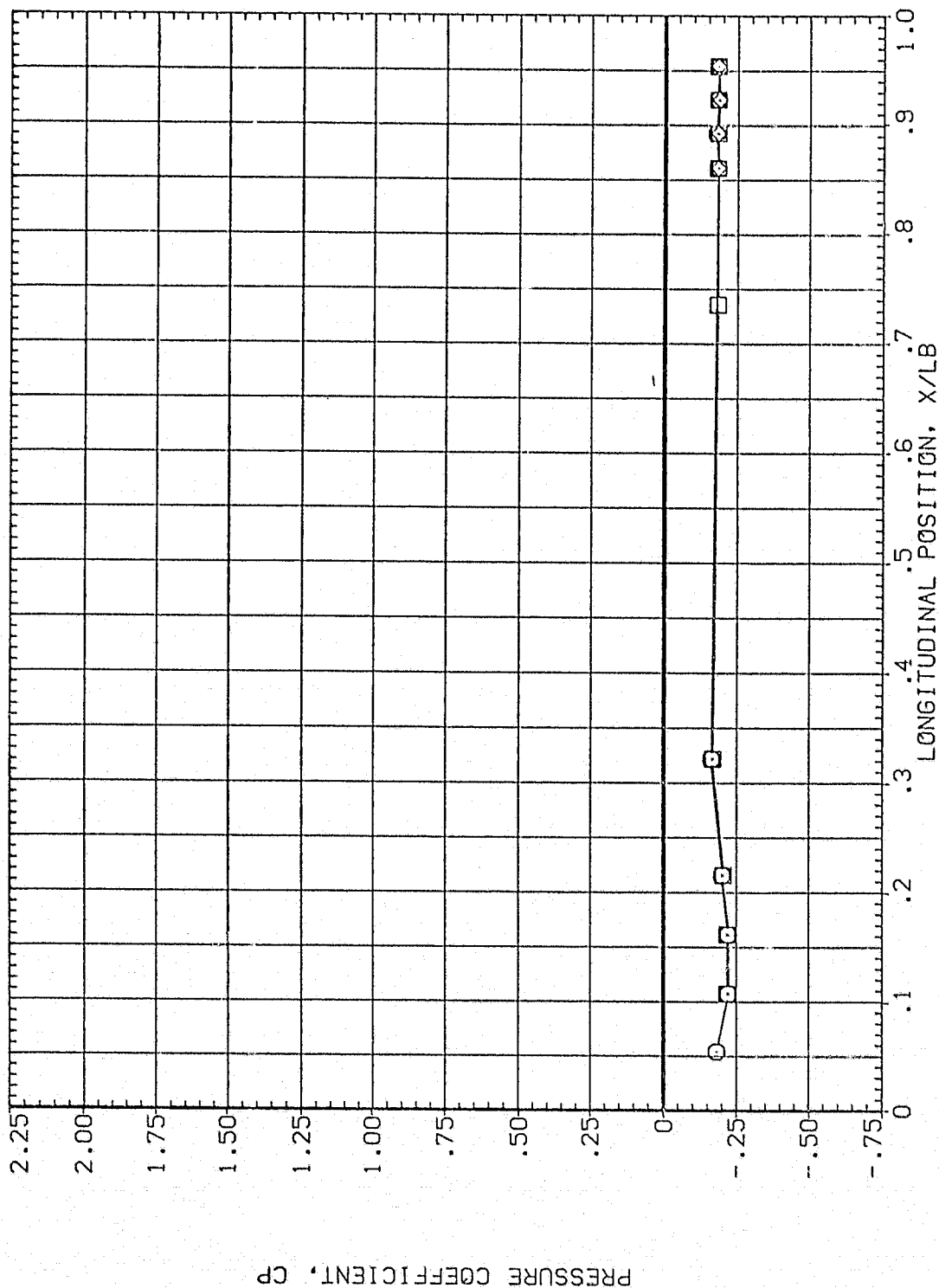


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	45.000	67.500	54.110	54.110	1.960	1.960	BETA	.000	OFFSET	60.000
○	67.500						MOUNT	2.000	PHI	.000
◇	90.000									

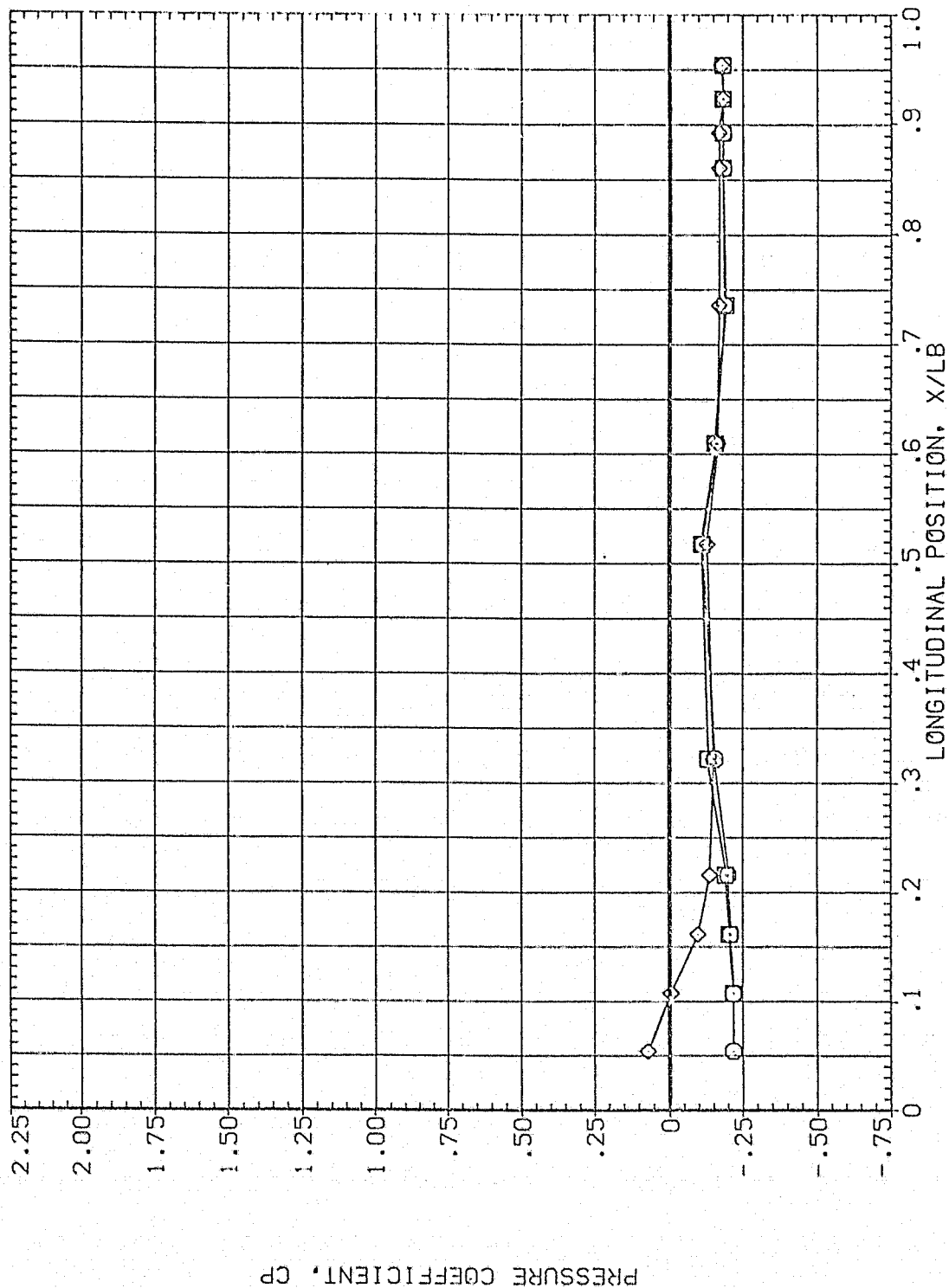


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA MOUNT	.000 OFFSET	.000 PHI
○	112.500	54.110	1.960			
□	135.000					
◇	157.500					

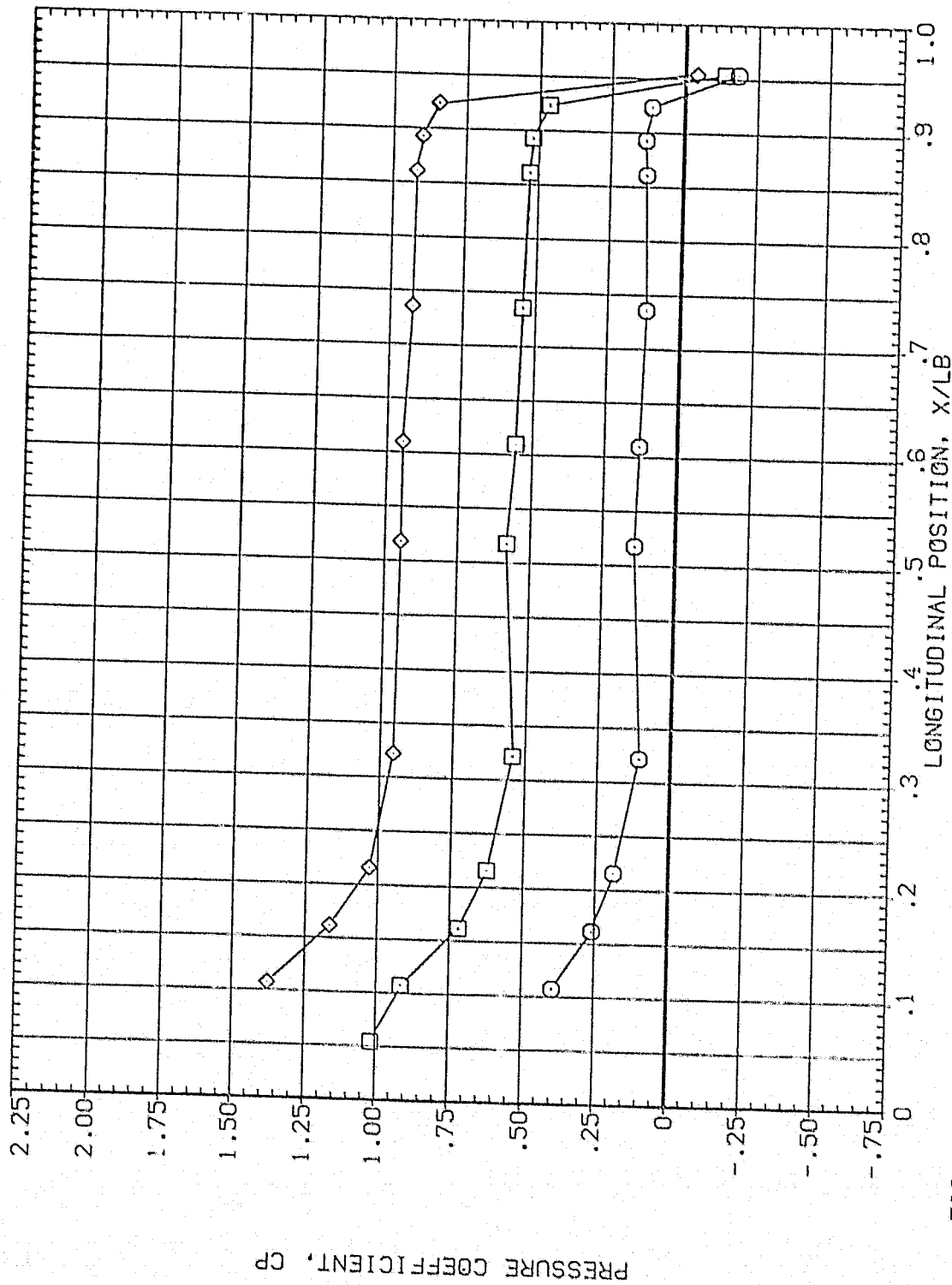


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	54.110	1.980	Mount	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				50.000

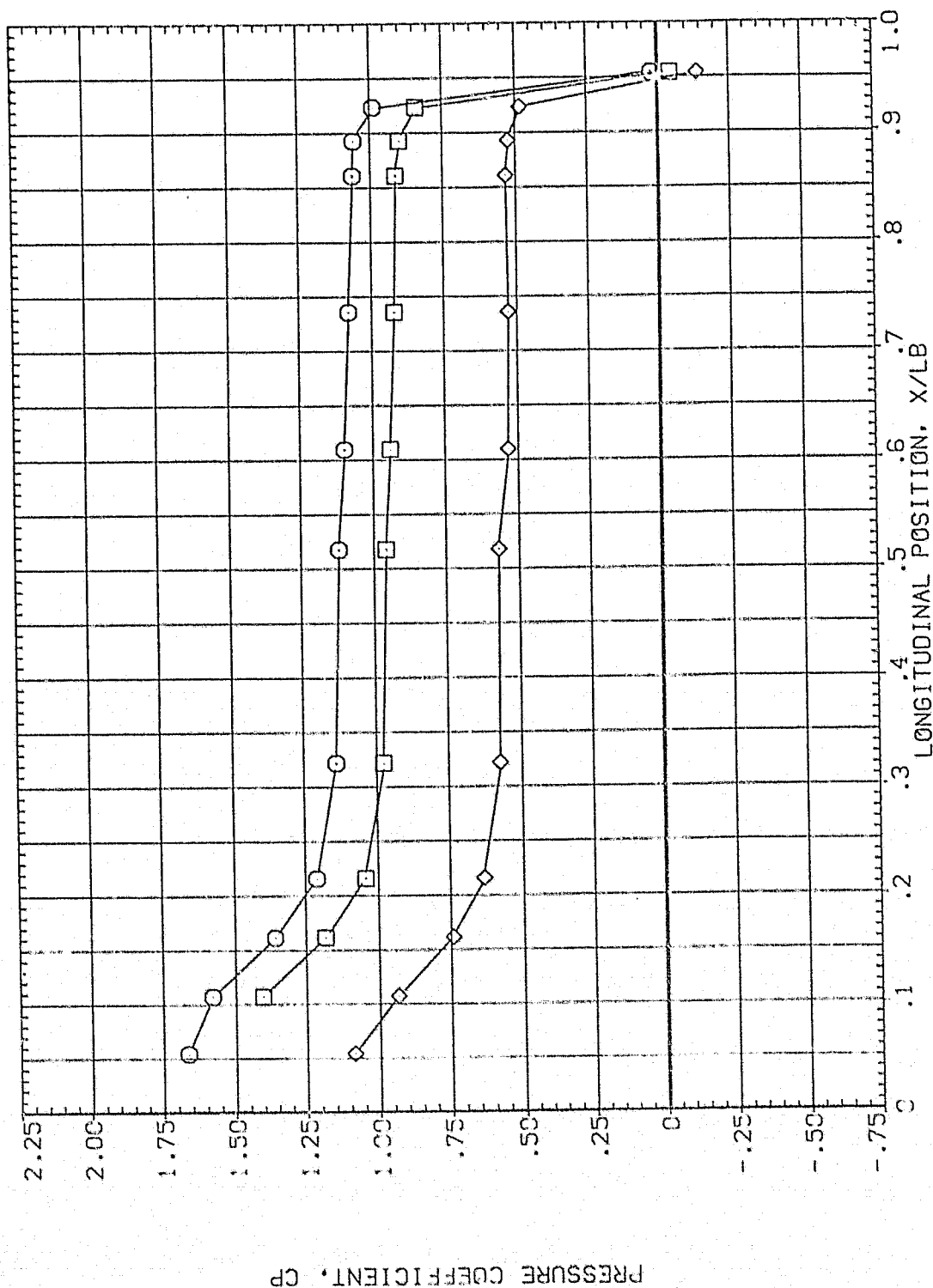


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES			
				BETA	OFFSET	PHI	
○	247.500	54.110	1.960	MCOUNT	.000	2.000	60.000
◇	270.000						.000
◇	292.500						

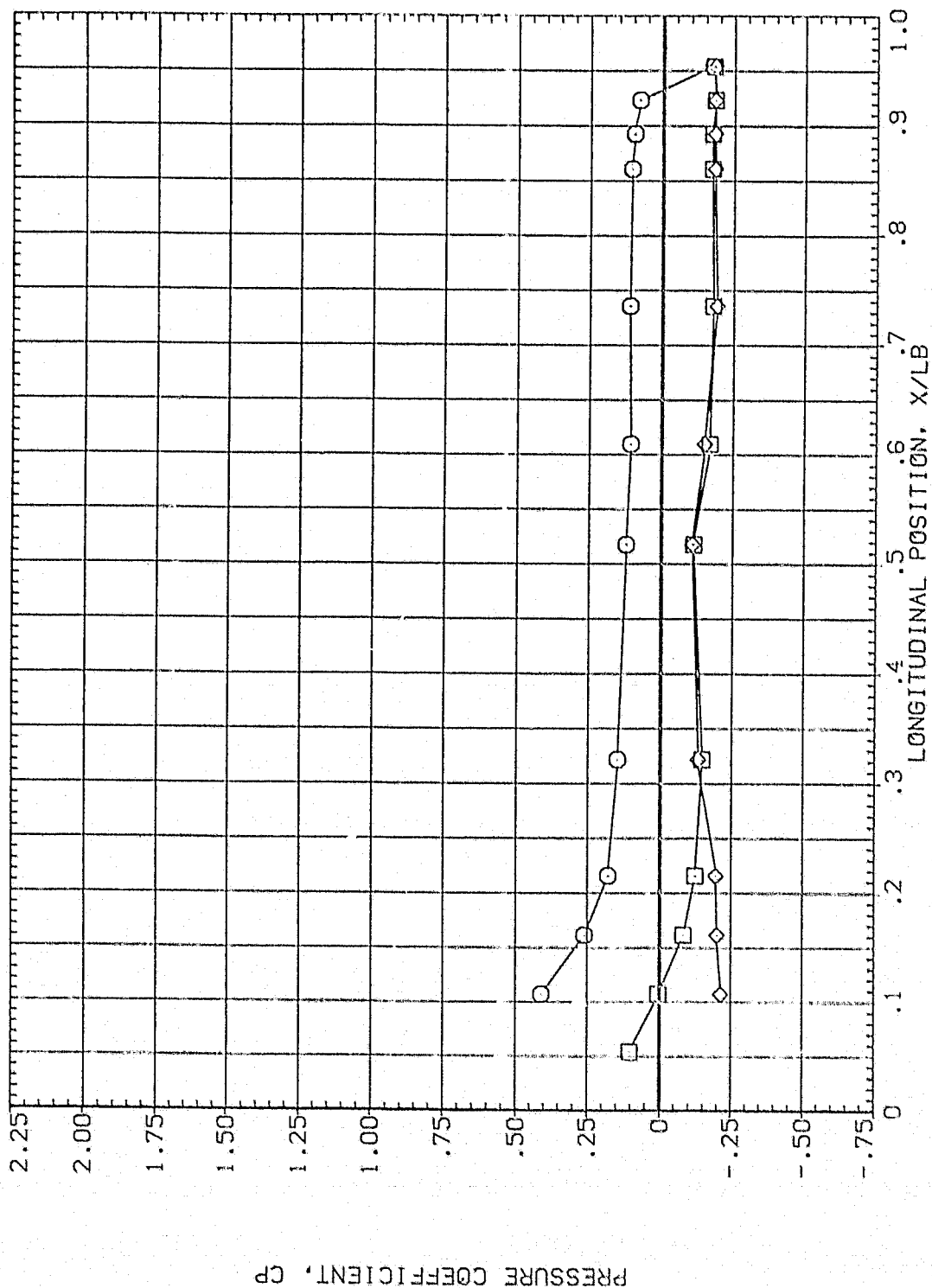


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	315.000	54.110	1.960	2.000	.000	60.000
□	326.000					.000
◇	346.000					

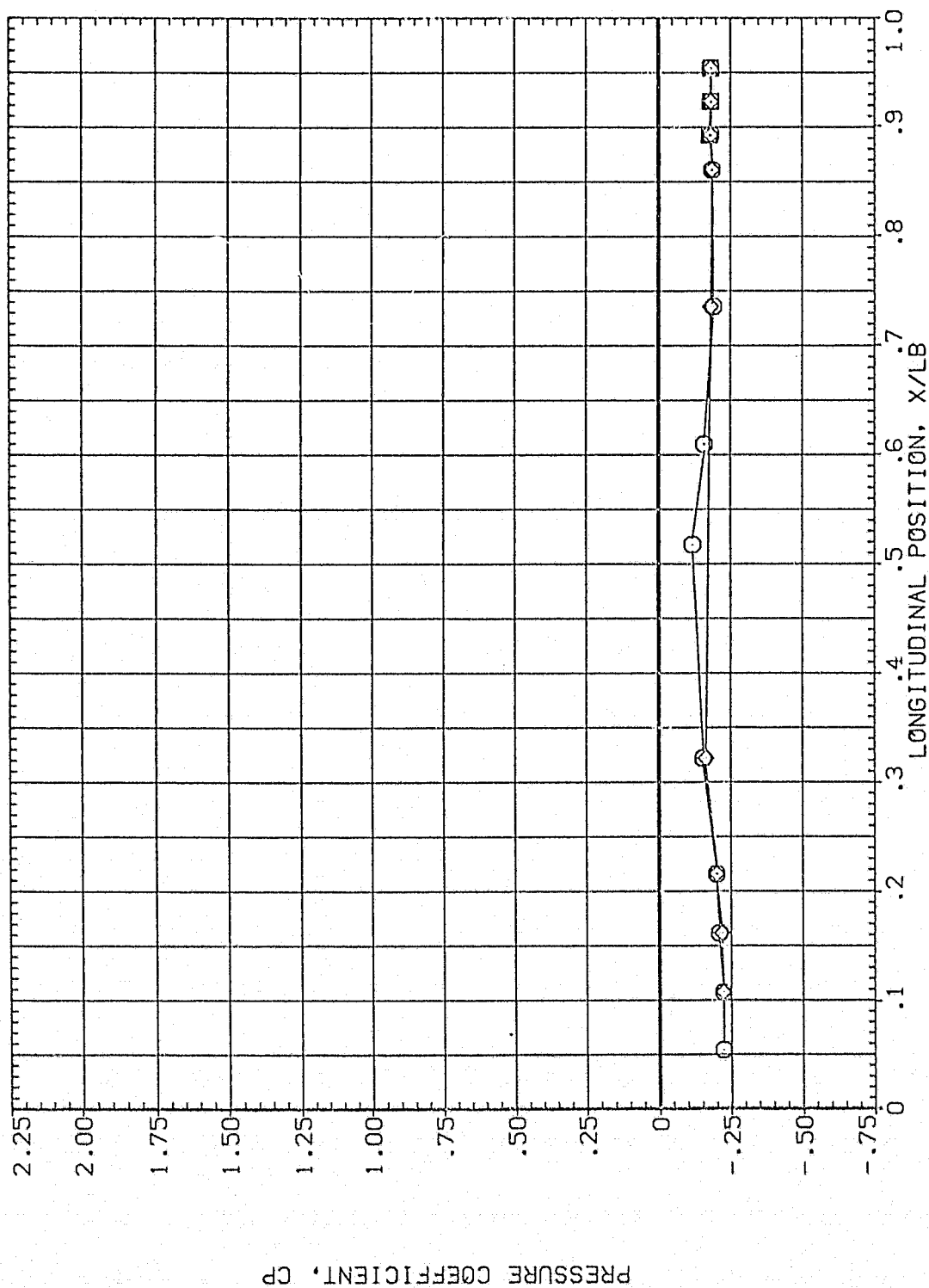


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2. (P1A063)

SYMBOL THETA ALPHA MACH
 O .000 57.110 1.960
 □ 14.000
 ◇ 24.000

PARAMETRIC VALUES
 .000 .000 60.000
 BETA OFFSET PHI
 MOUNT 2.000 .000

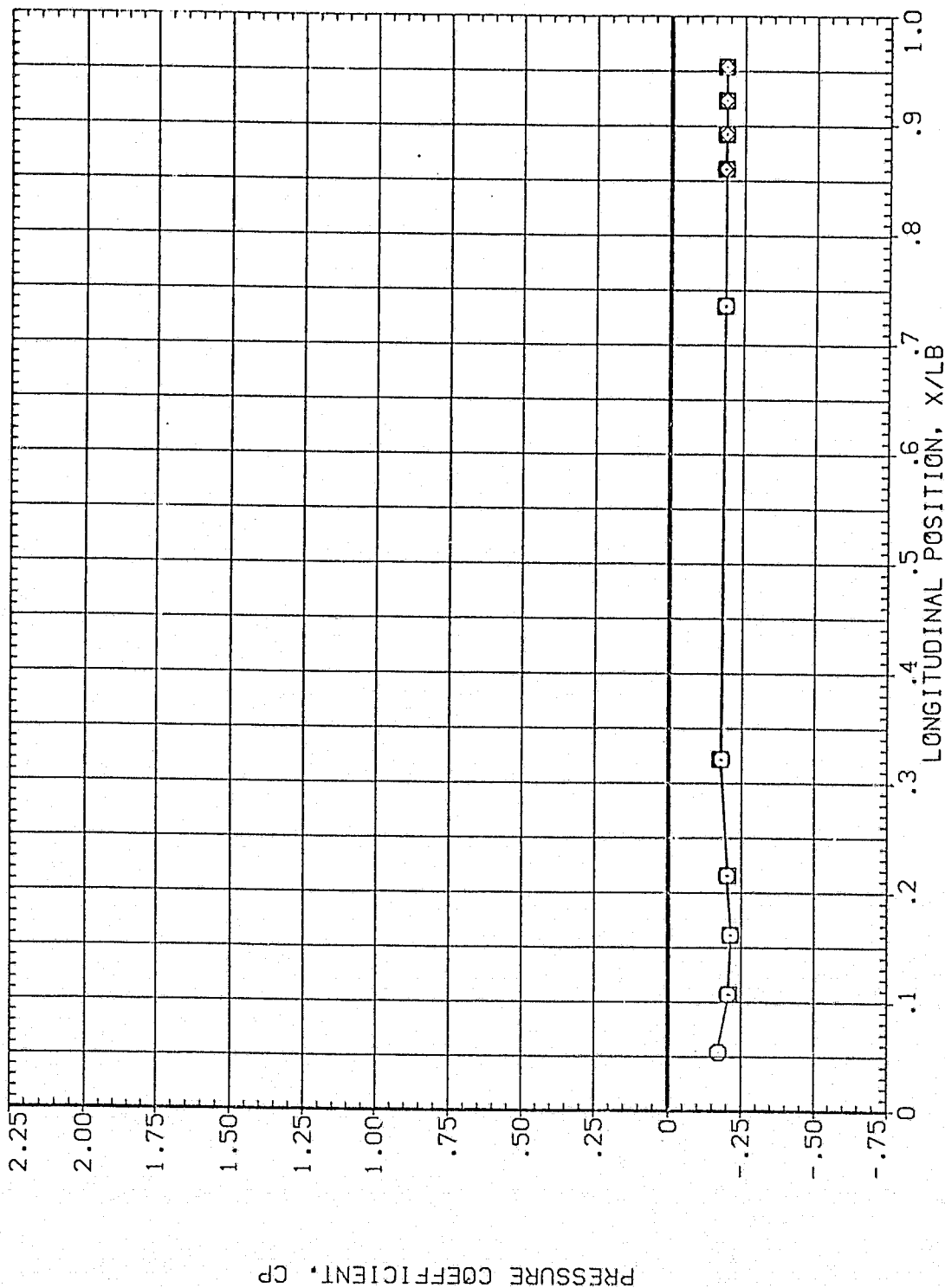


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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SYMBOL	THETA	ALPHA	HACH	BETA	PARAMETRIC VALUES
○	45.000	57.110	1.960	MOUNT	.000 OFFSET
□	67.500				2.000 PHI
◇	90.000				60.000

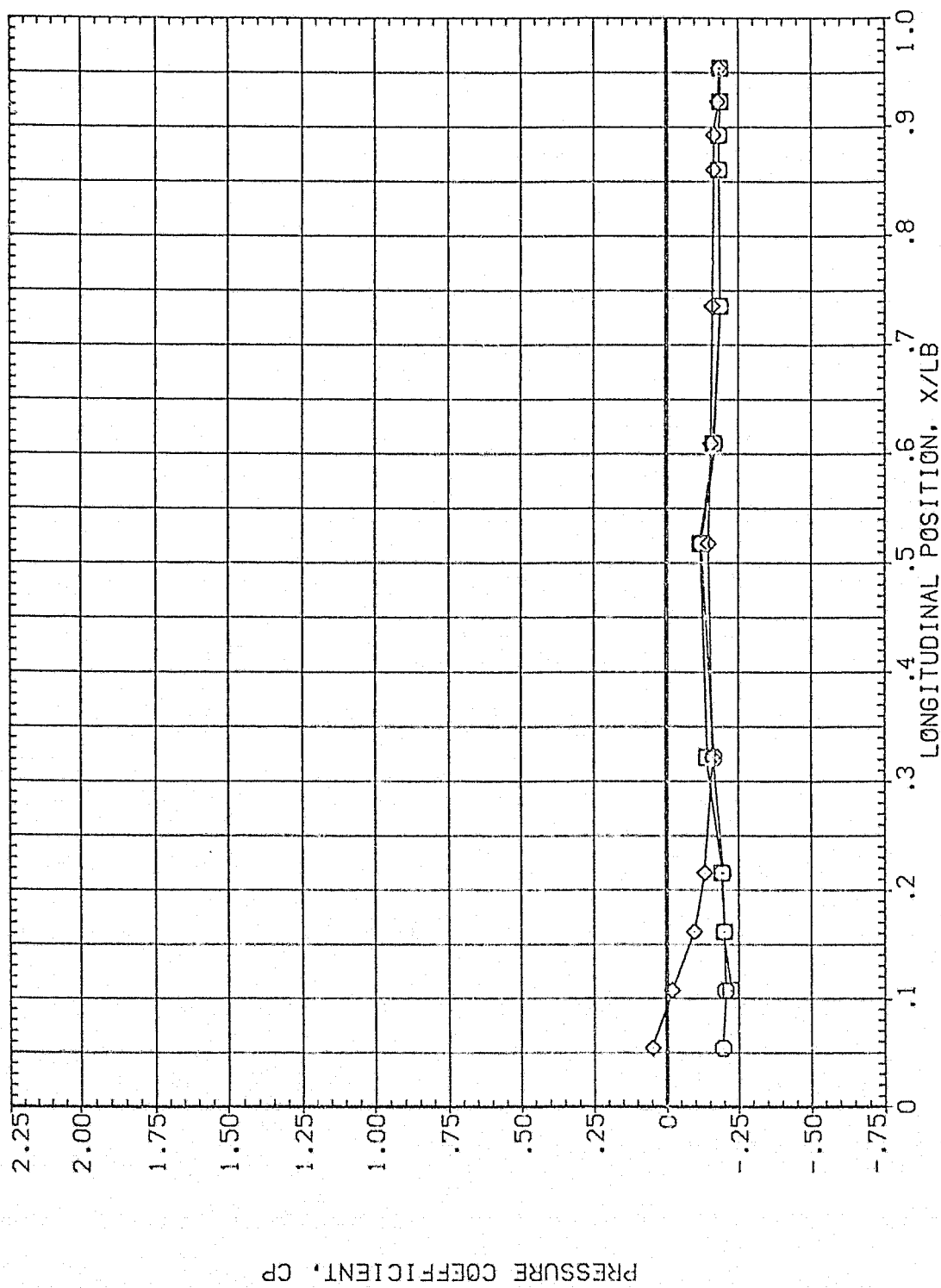


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	57.110	1.960	2.000	.000	.000
□	135.000					
◇	157.500					

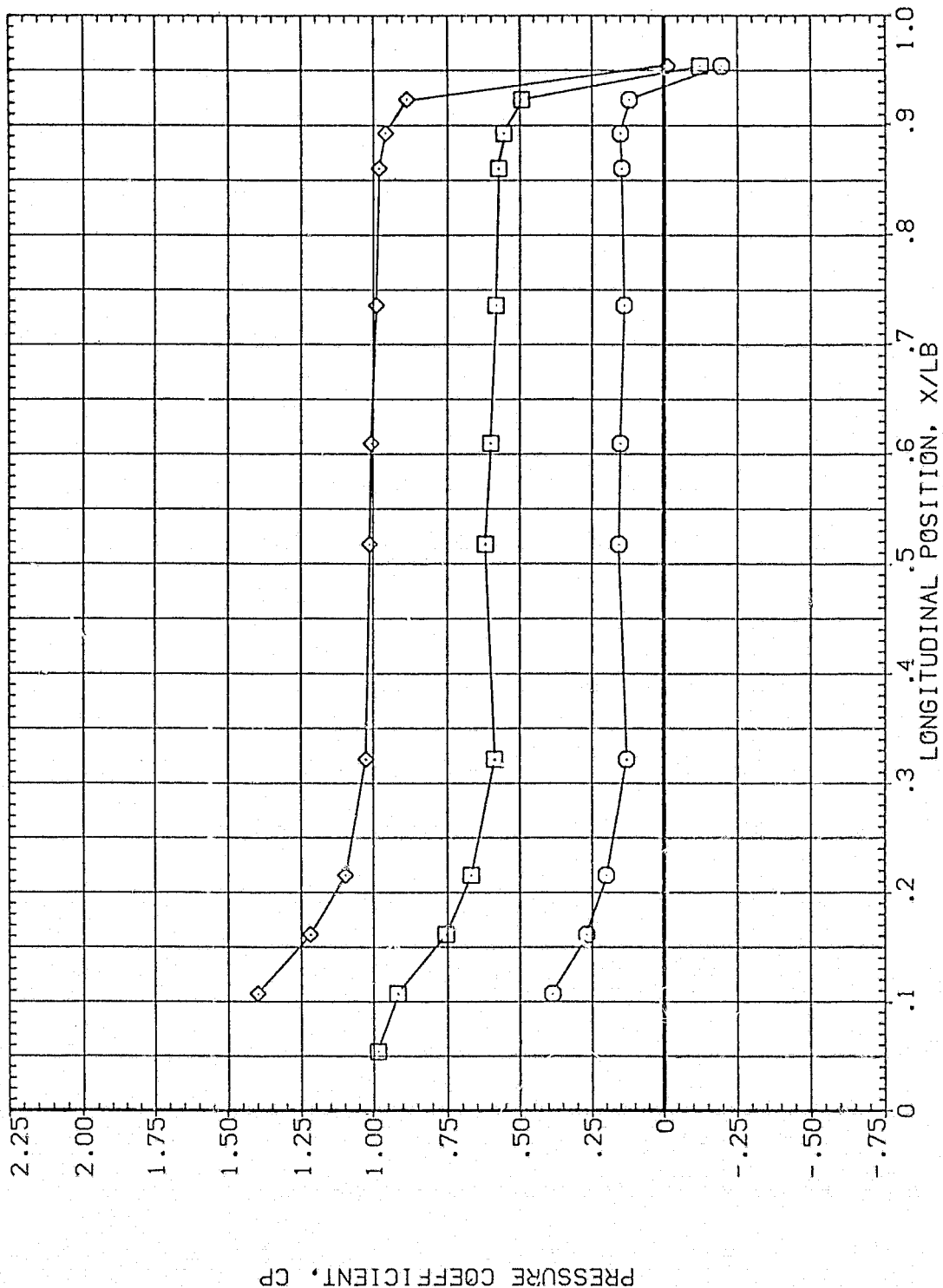


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	57.110	1.960	Mount	.000
□	202.500			Offset	2.000
◇	225.000			Phi	.000

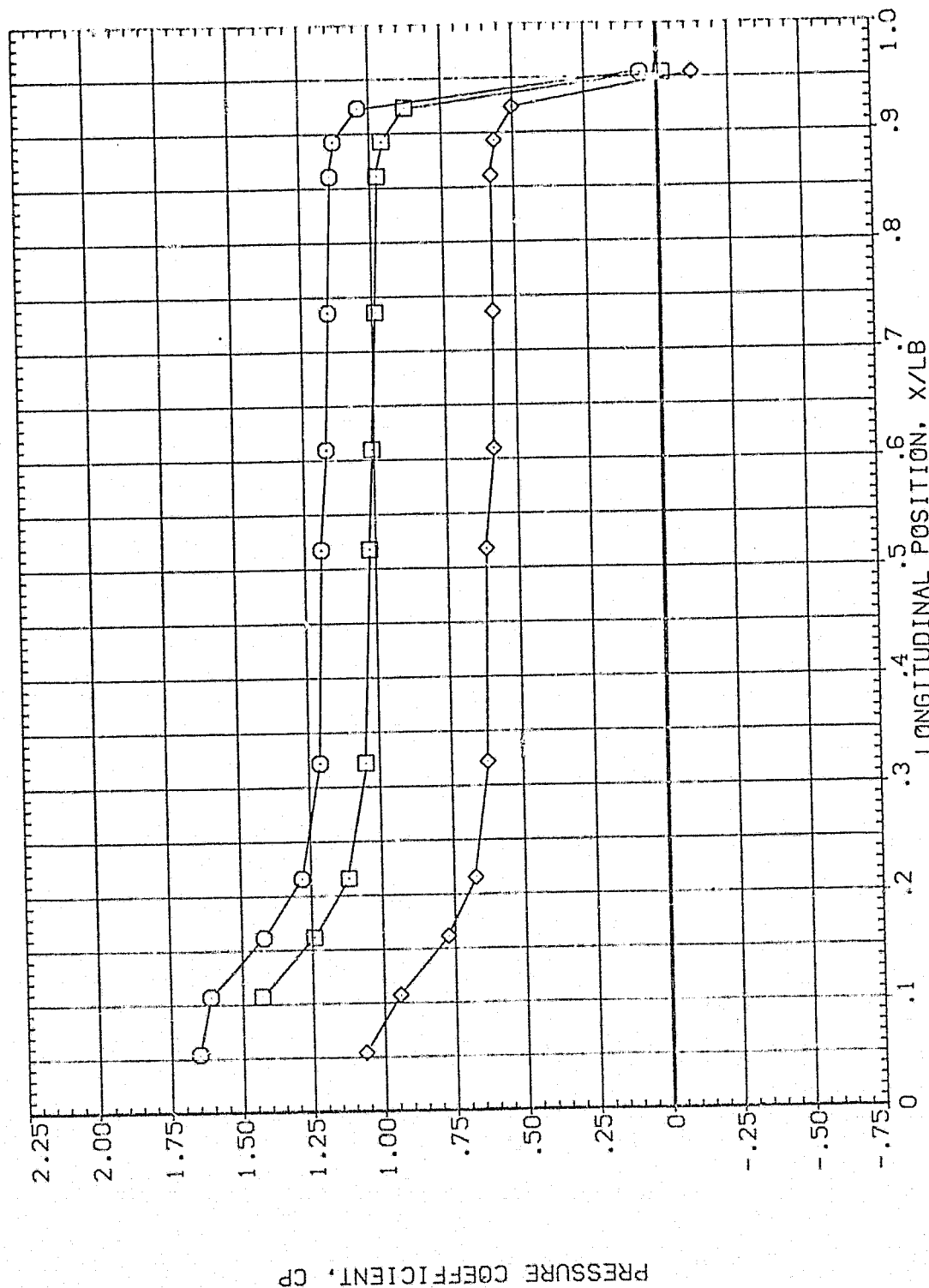


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	57.110	1.960	2.000	.000	60.000
□	270.000					.000
◇	292.500					

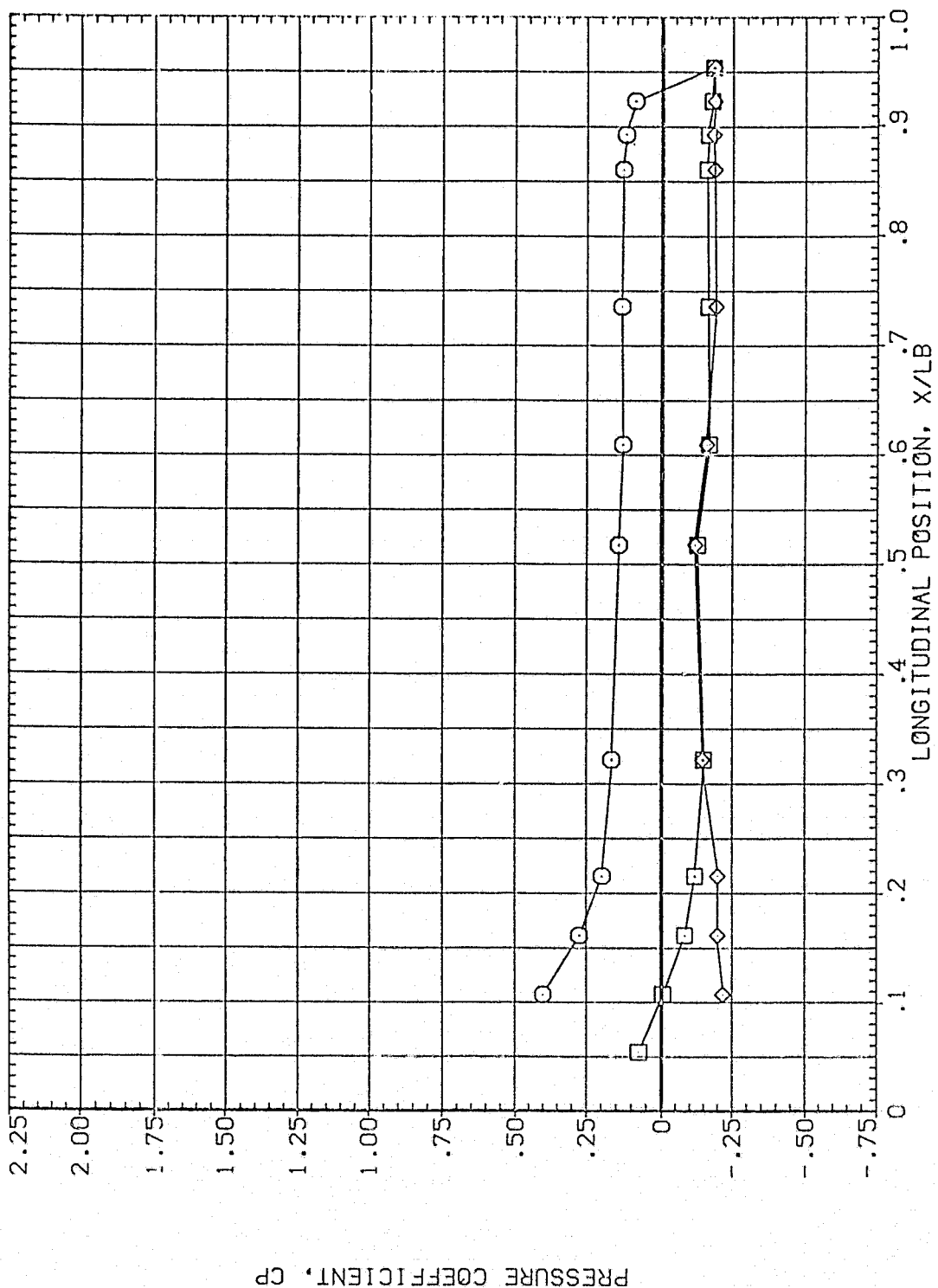


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

PARAMETRIC VALUES	
.000	OFFSET
2.000	PHI

000,000
60,000

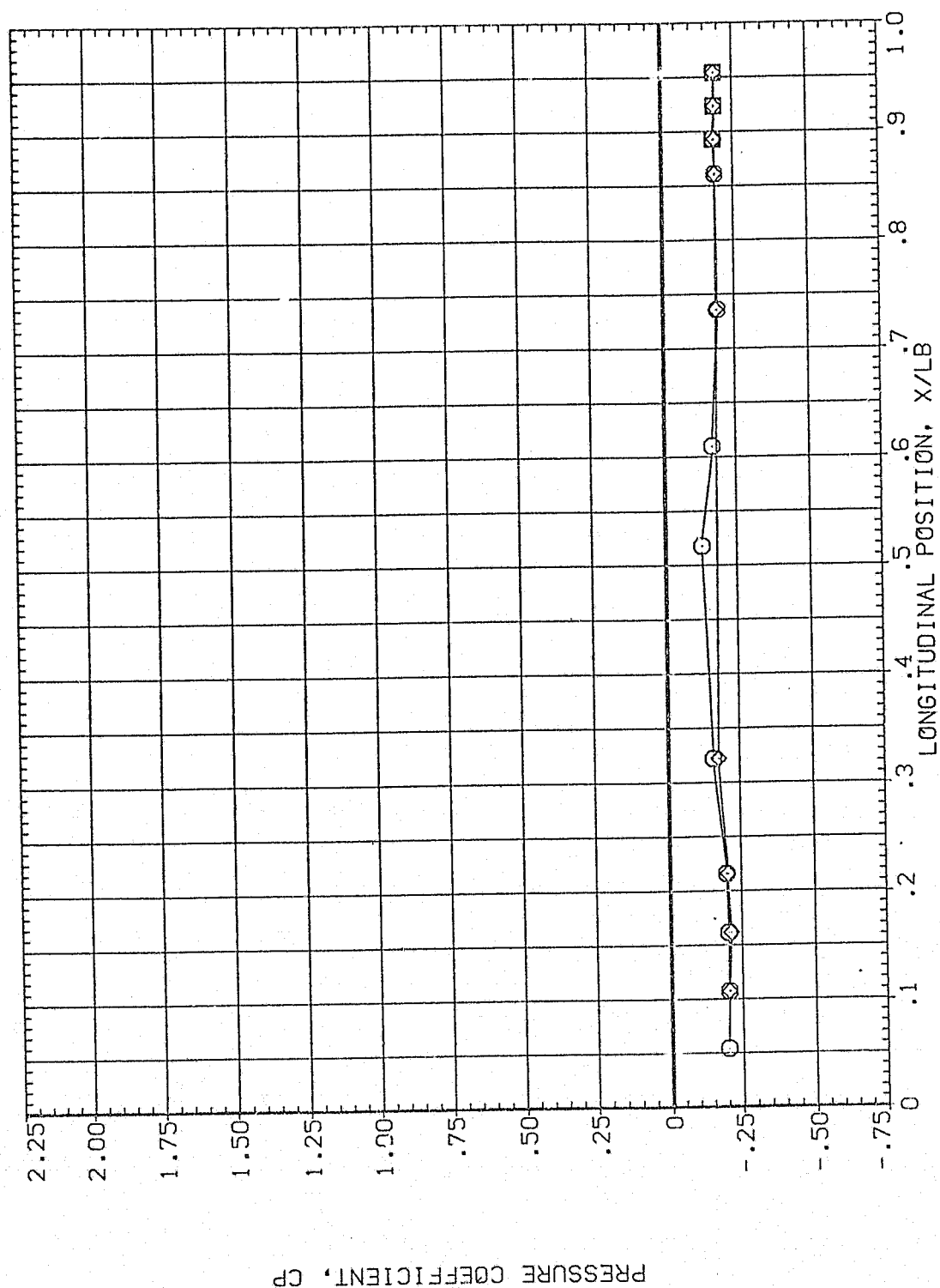


FIG. 8. PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.000	60.130	1.970	.000	.000	.000
□	14.000			2.000		
◇	24.000					

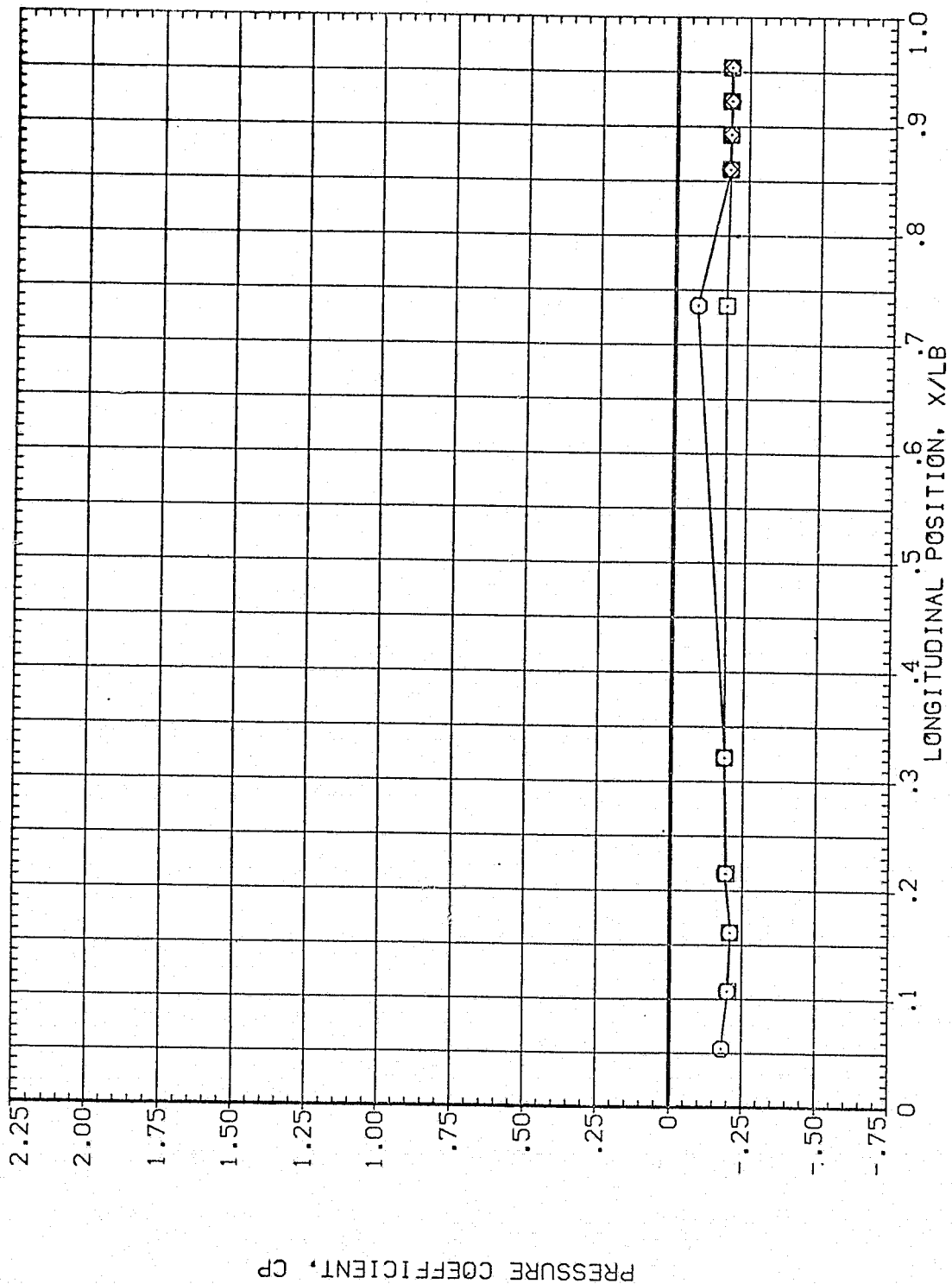


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	60.130	1.970	MOUNT	.000 OFFSET
□	67.500				2.000 PHI
◇	90.000				60.000

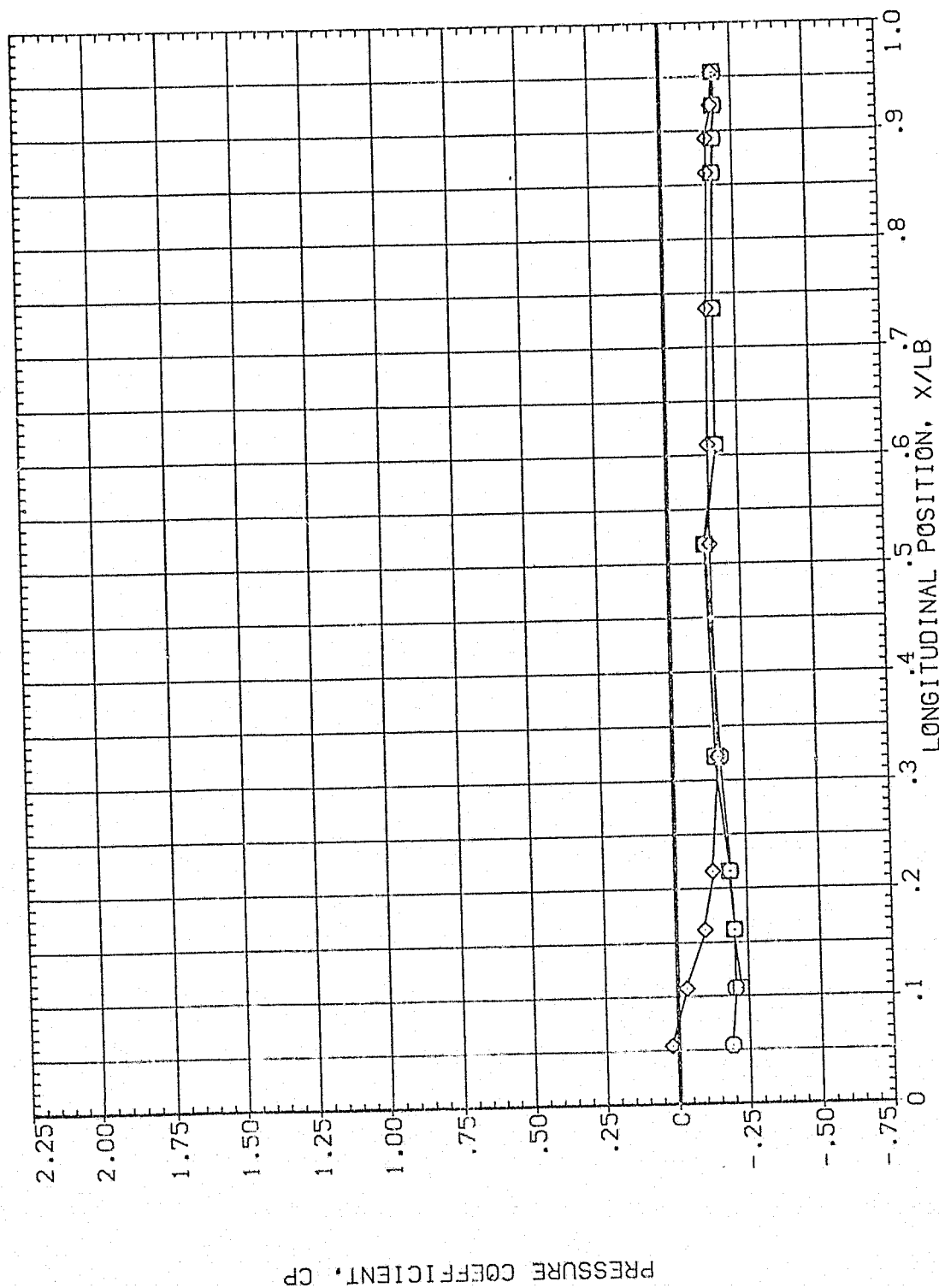


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES			
				BETA	OFFSET	PHI	
○	112.500	60.130	1.970	MOUNT	.000	2.000	60.000
□	135.000						
◇	157.500						

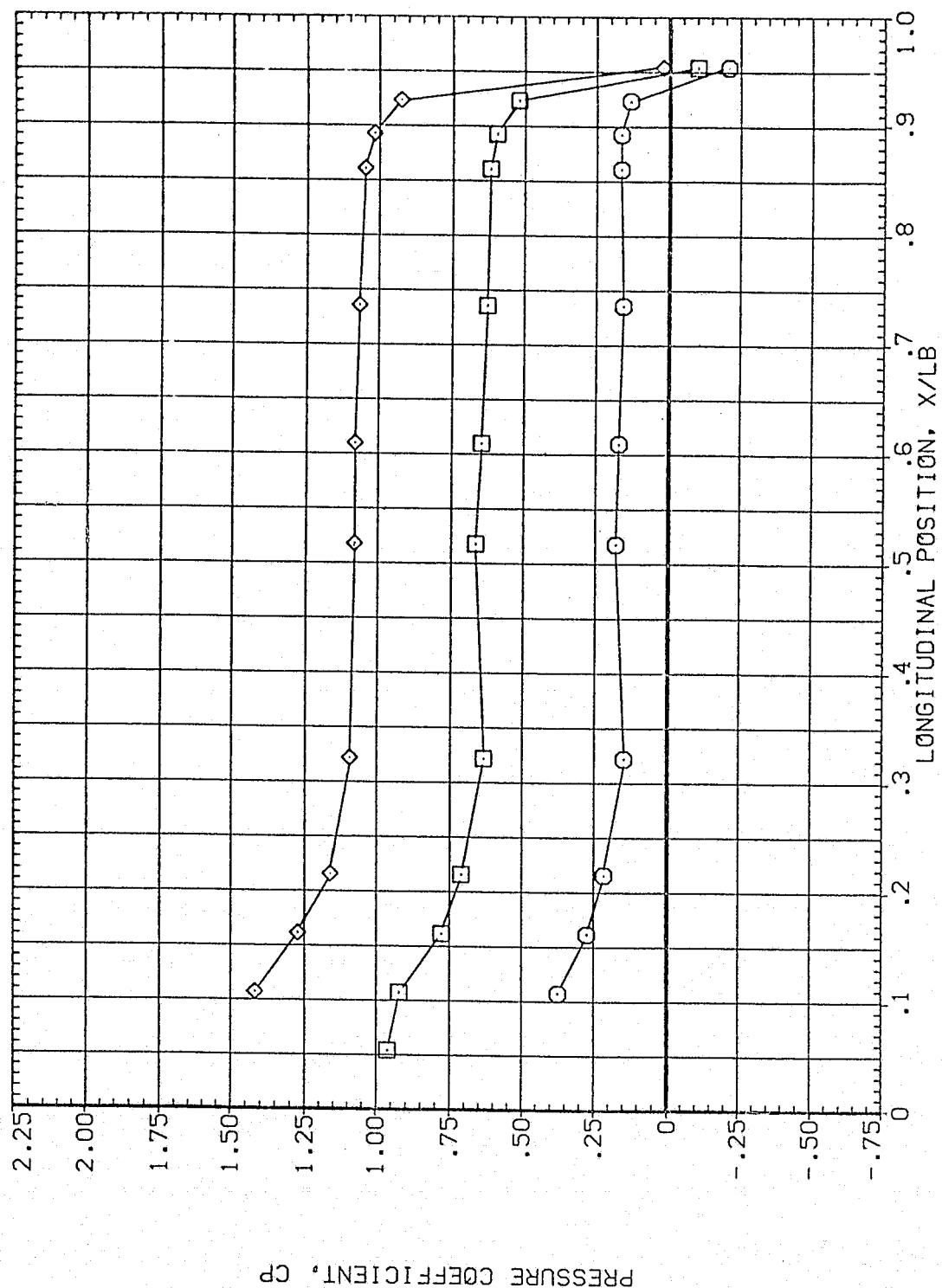


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	60.130	1.970	MOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				.000

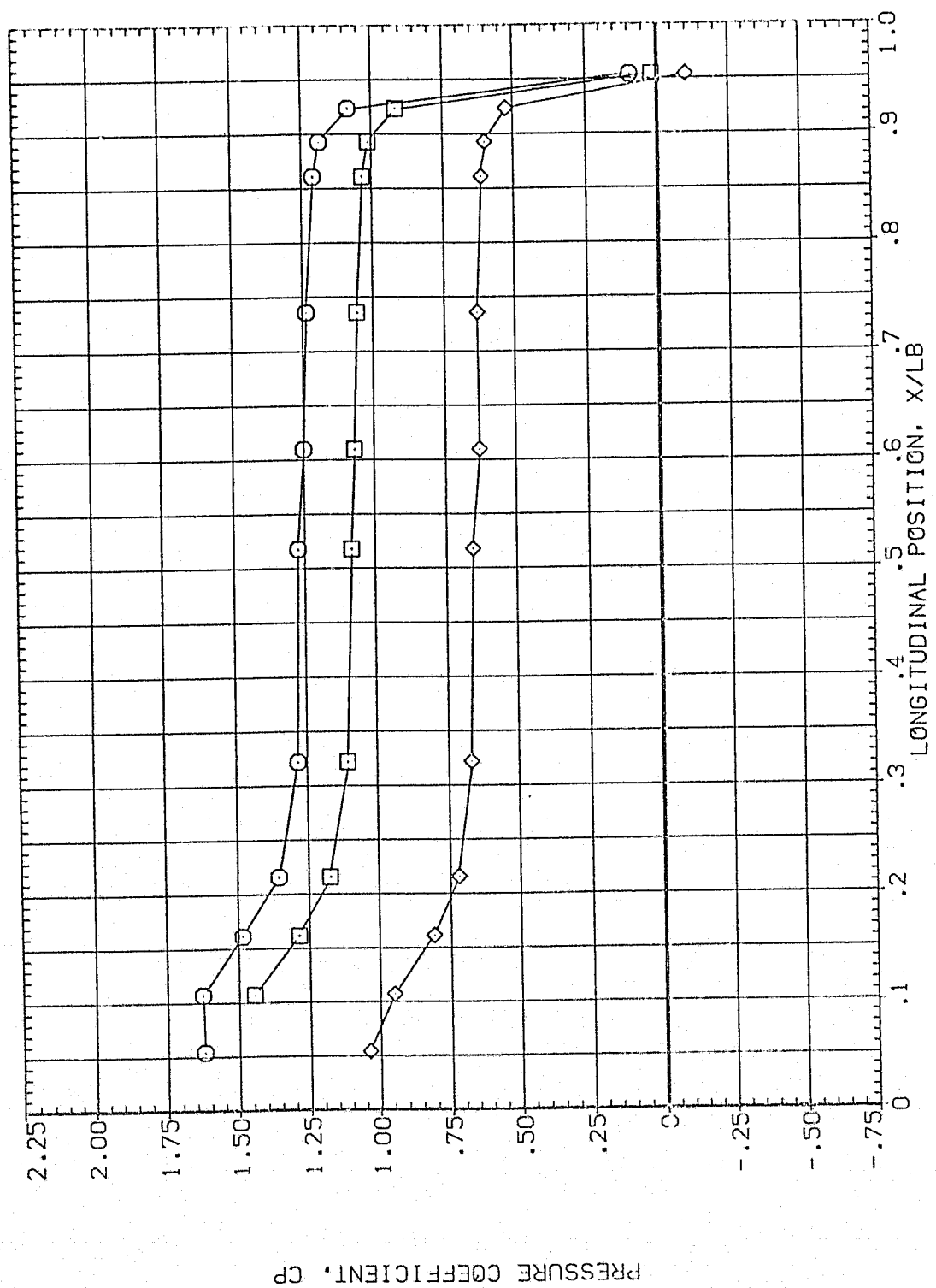


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	60.130	1.970	.000	.000	.000
□	270.000			2.000		
◇	292.500					

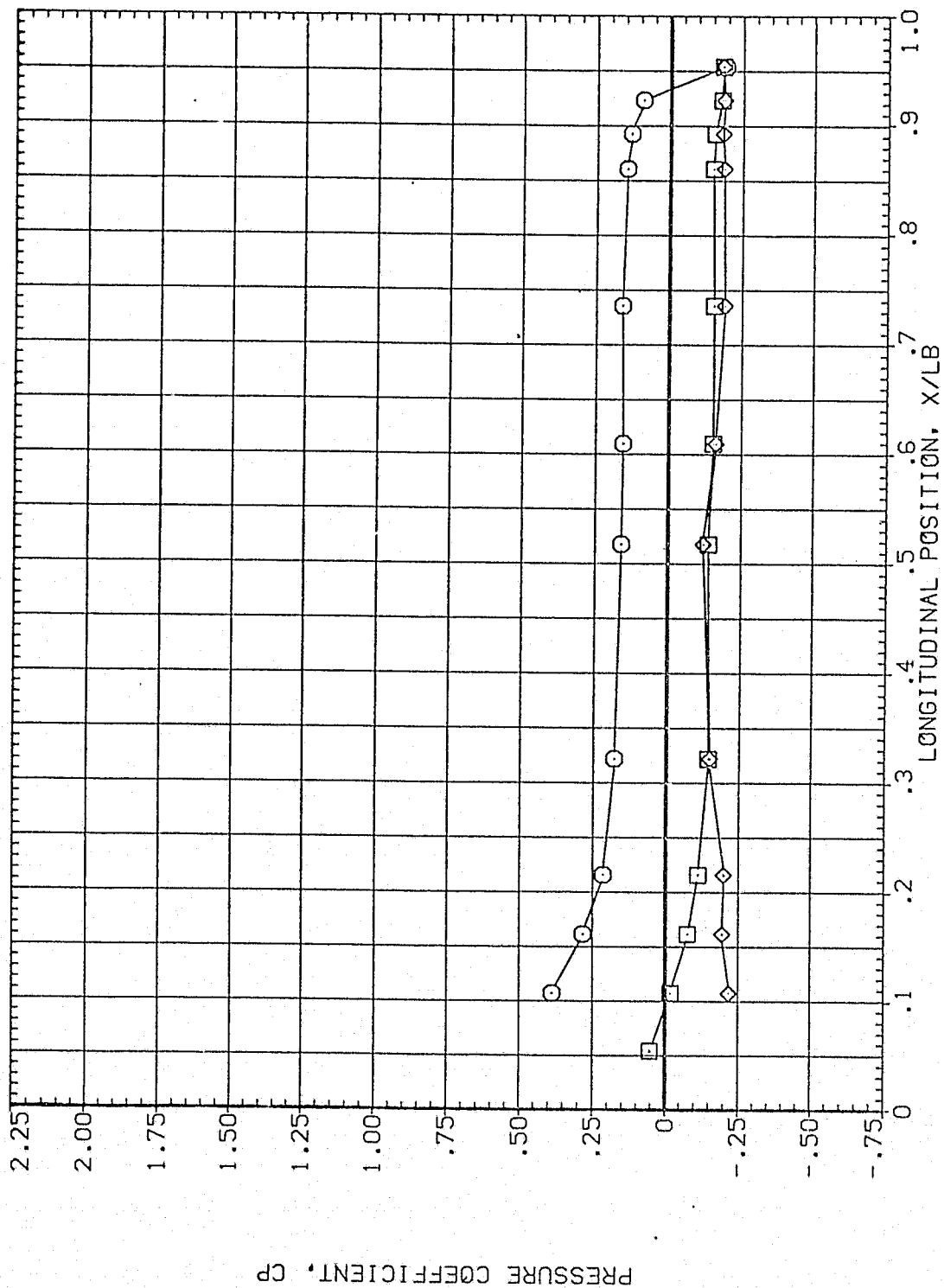


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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SYMBOL		THETA	ALPHA	MACH	PARAMETRIC VALUES		
○		315.000	60.130	1.970	BETA	OFFSET	60.000
□		326.000			WUNT	PHI	.000
◇		346.000					

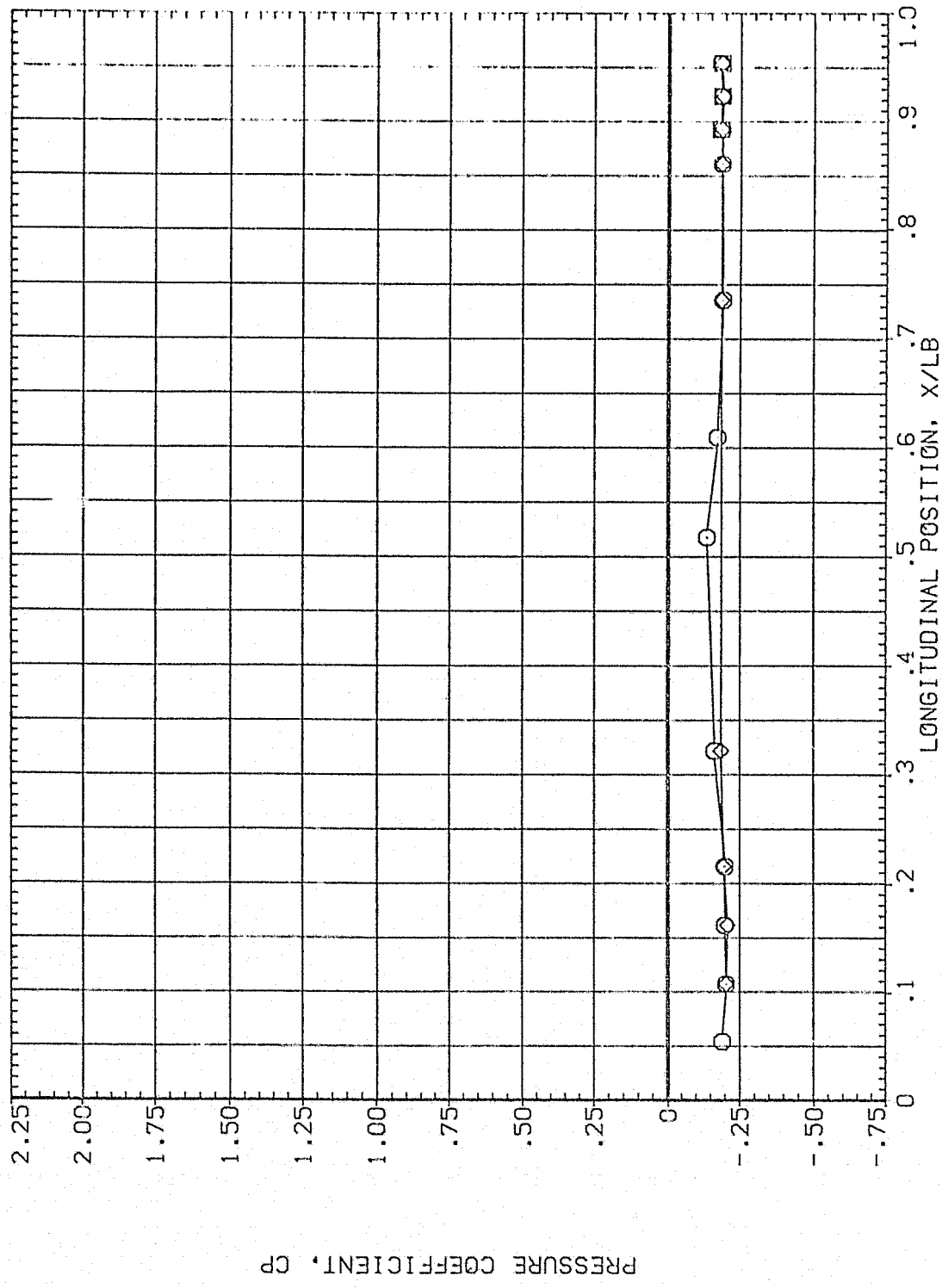


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA065)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	○	.000	63.130	1.960			BETA	.000	OFFSET	60.000
□		14.000					MOUNT	2.000	PHI	.000
◇		24.000								

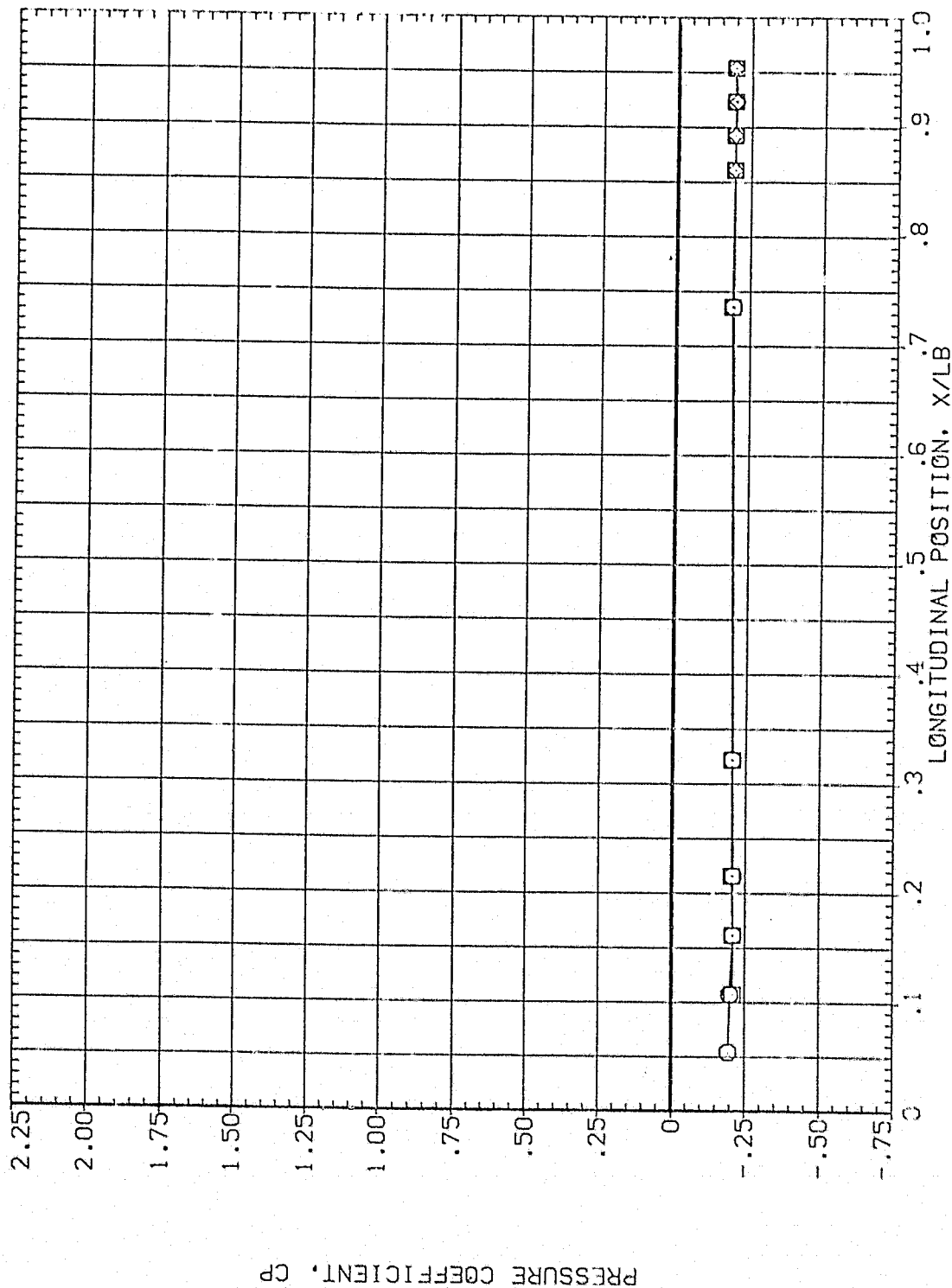


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	PARAMETRIC VALUES		
	THETA	ALPHA	HACH
◇	45.000	63.130	1.960
□	67.500		
○	90.000		
		BETA	OFFSET
		MOUNT	PHI
			60.000
			.000

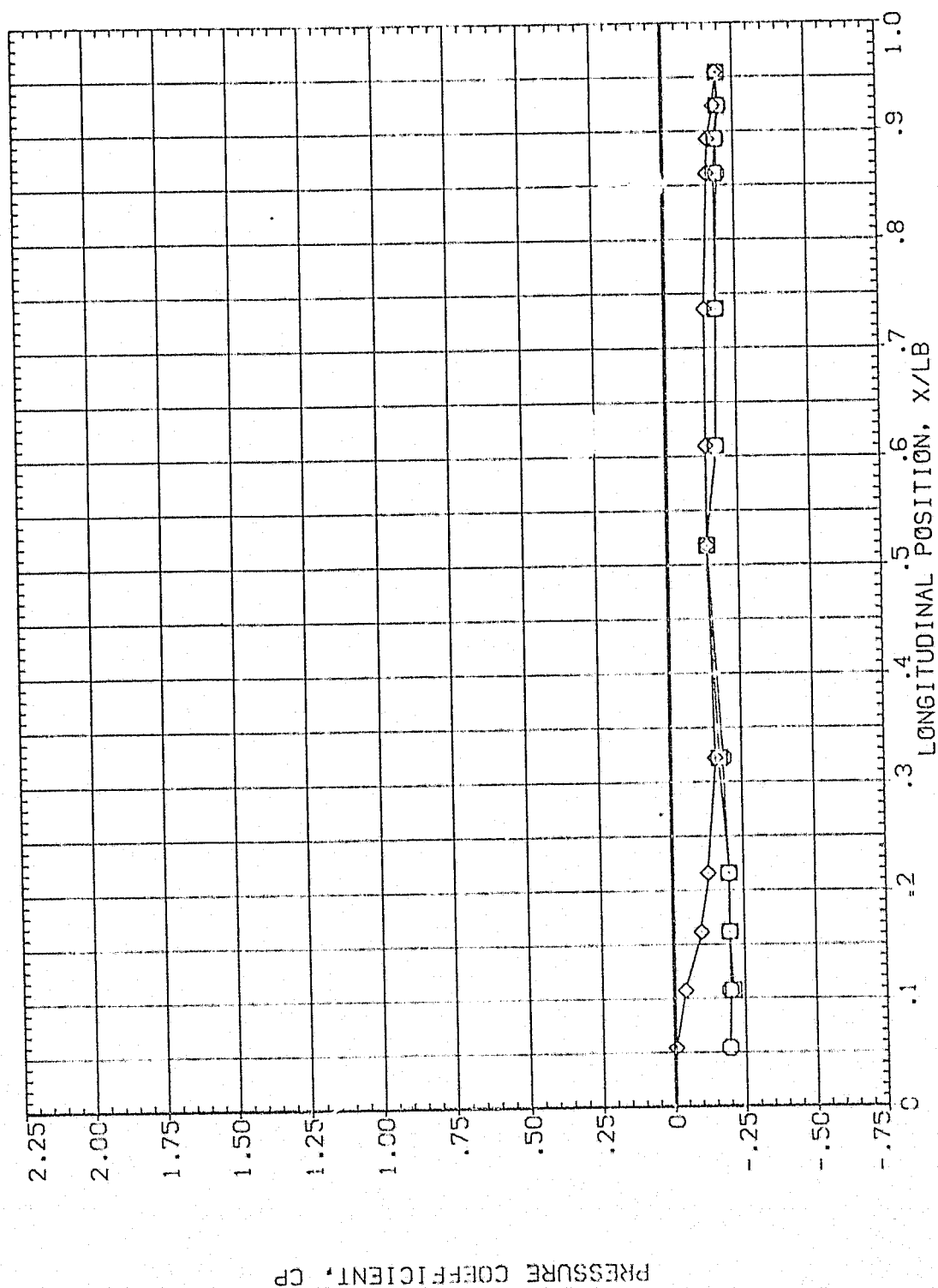


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

PARAMETRIC VALUES
 .000 OFFSET
 2.000 PHI
 60.000
 .000

BETA
 MOUNT

ALPHA
 63.130
 MACH
 1.960

THETA
 112.500
 135.000
 157.500

SYMBOL
 ◇
 □
 ○

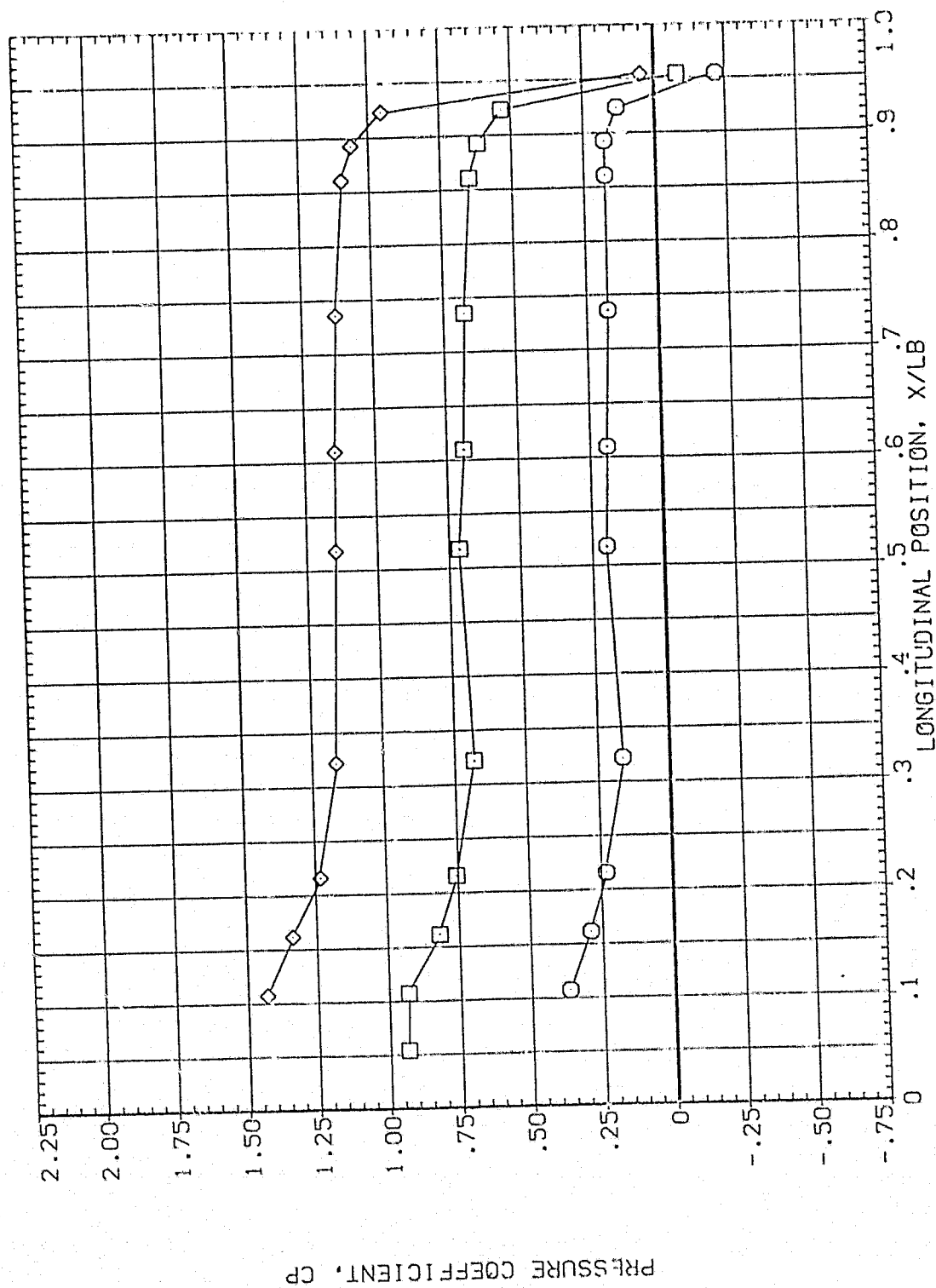


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	63.130	1.960	HEIGHT	.000
□	202.500			PHI	2.000
◇	225.000				60.000

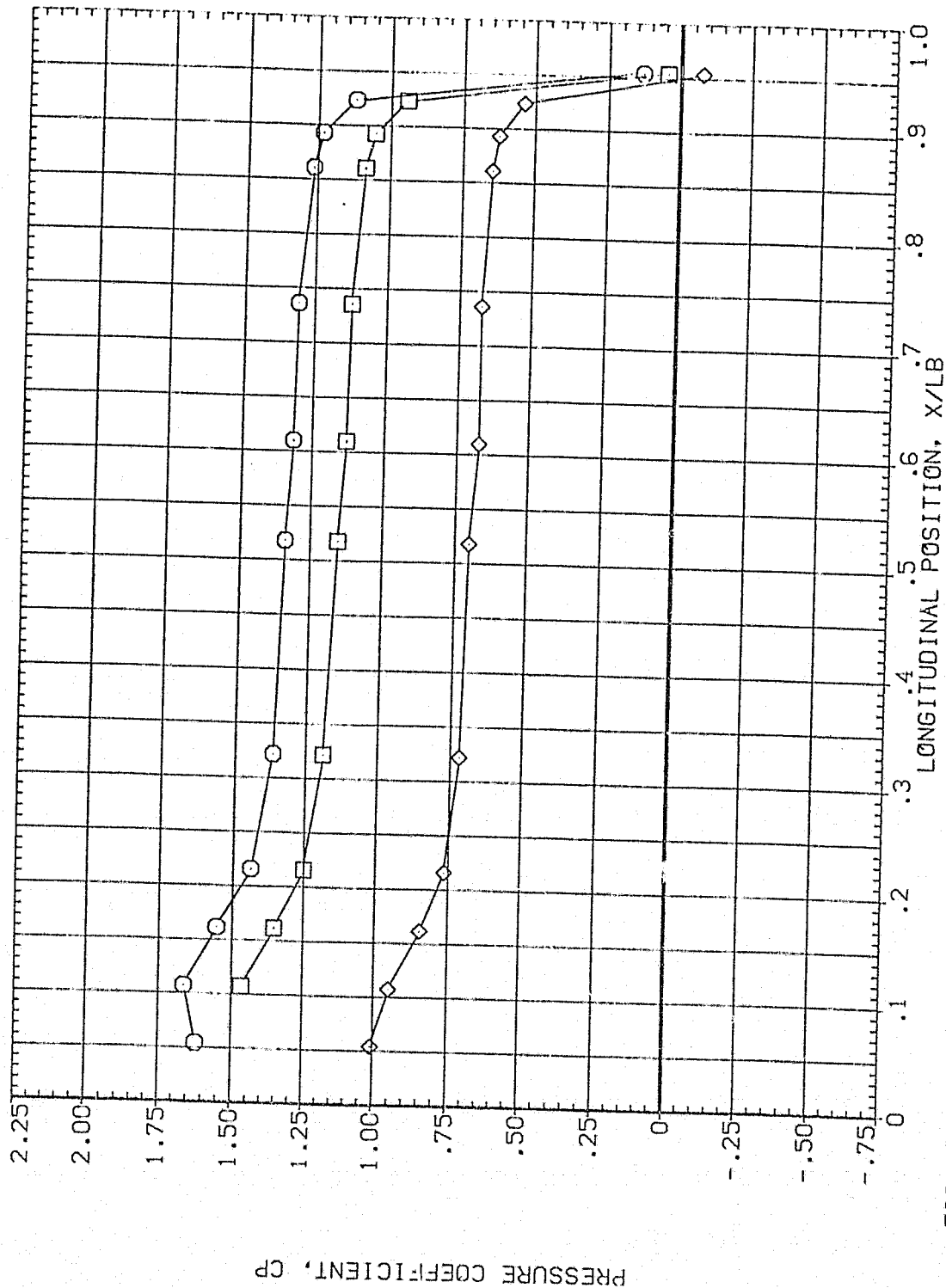


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL THETA ALPHA MACH
 ○ 247.500 63.130 1.960
 □ 270.000
 ◇ 292.500

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 60.000
 .000

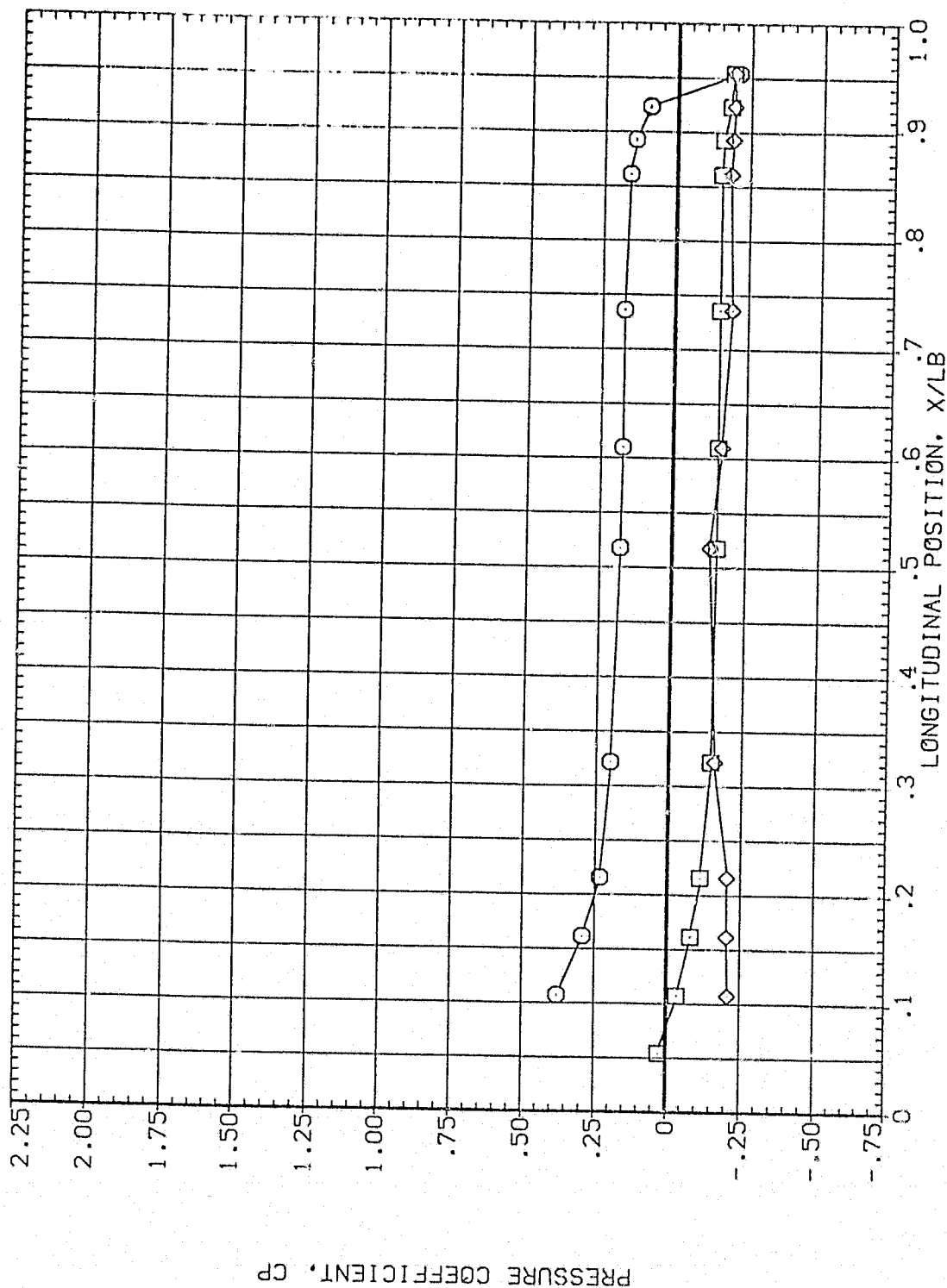


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 BETA .000
 COUNT 2.000
 OFFSET PHI .000

THETA ALPHA MACH
 315.000 63.130 1.960

SYMBOL
 O
 □
 ◇

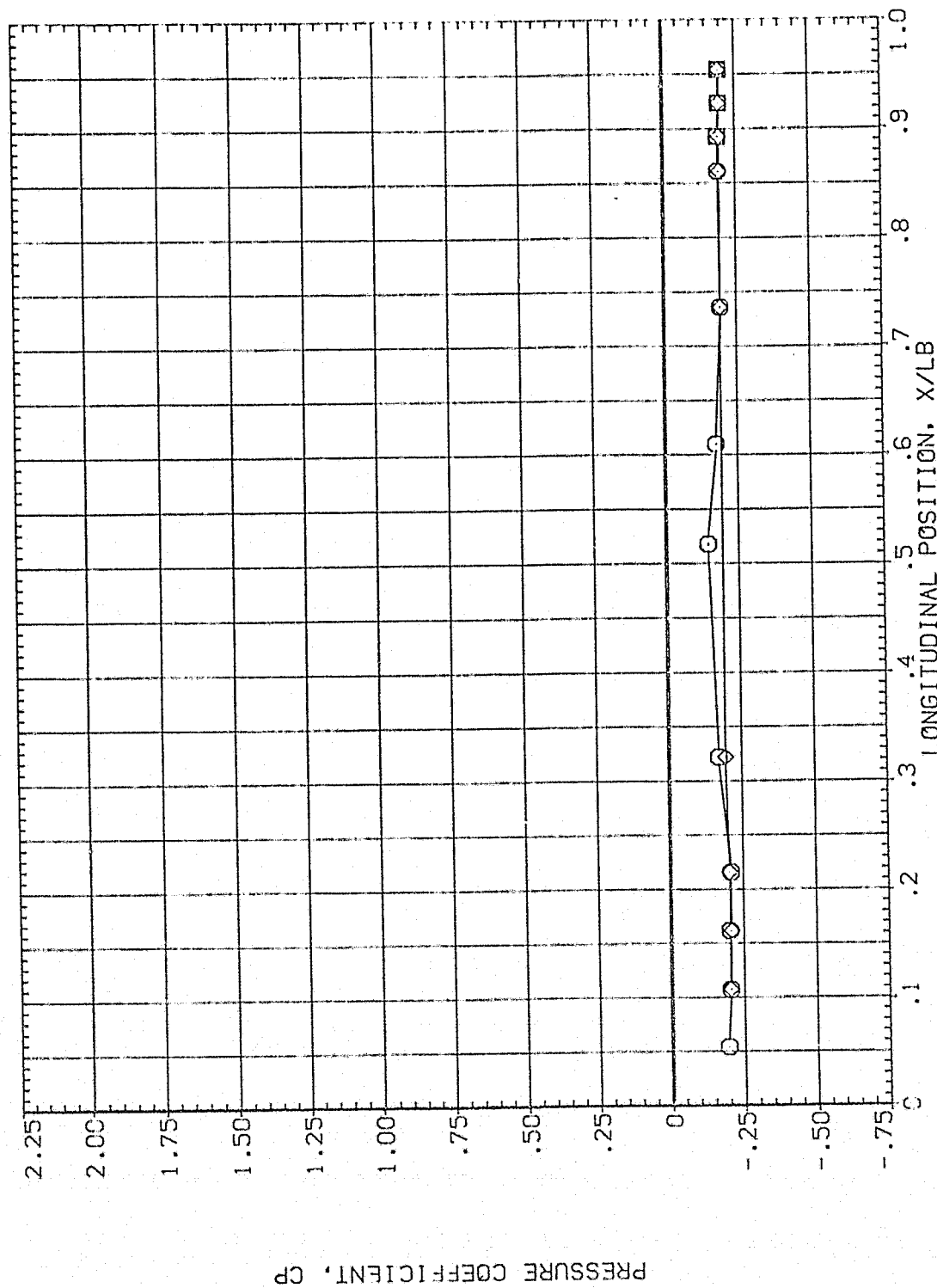


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.000	66.130	1.970	MOUNT	2.000	60.000
□	14.000					.000
◇	24.000					

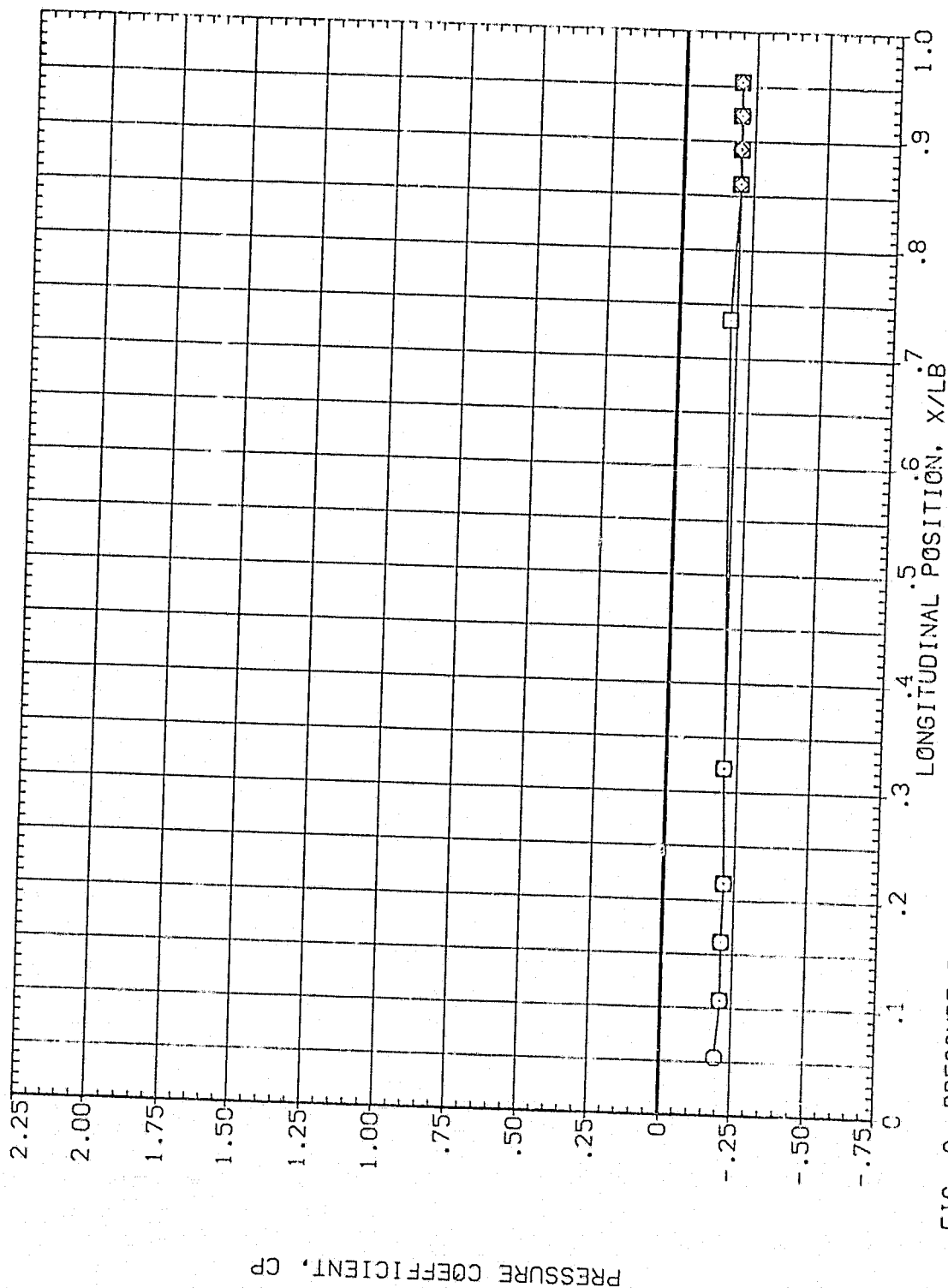


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	66.130	1.970	MOUNT	.000 OFFSET
□	67.500				2.000 PHI
◇	90.000				60.000

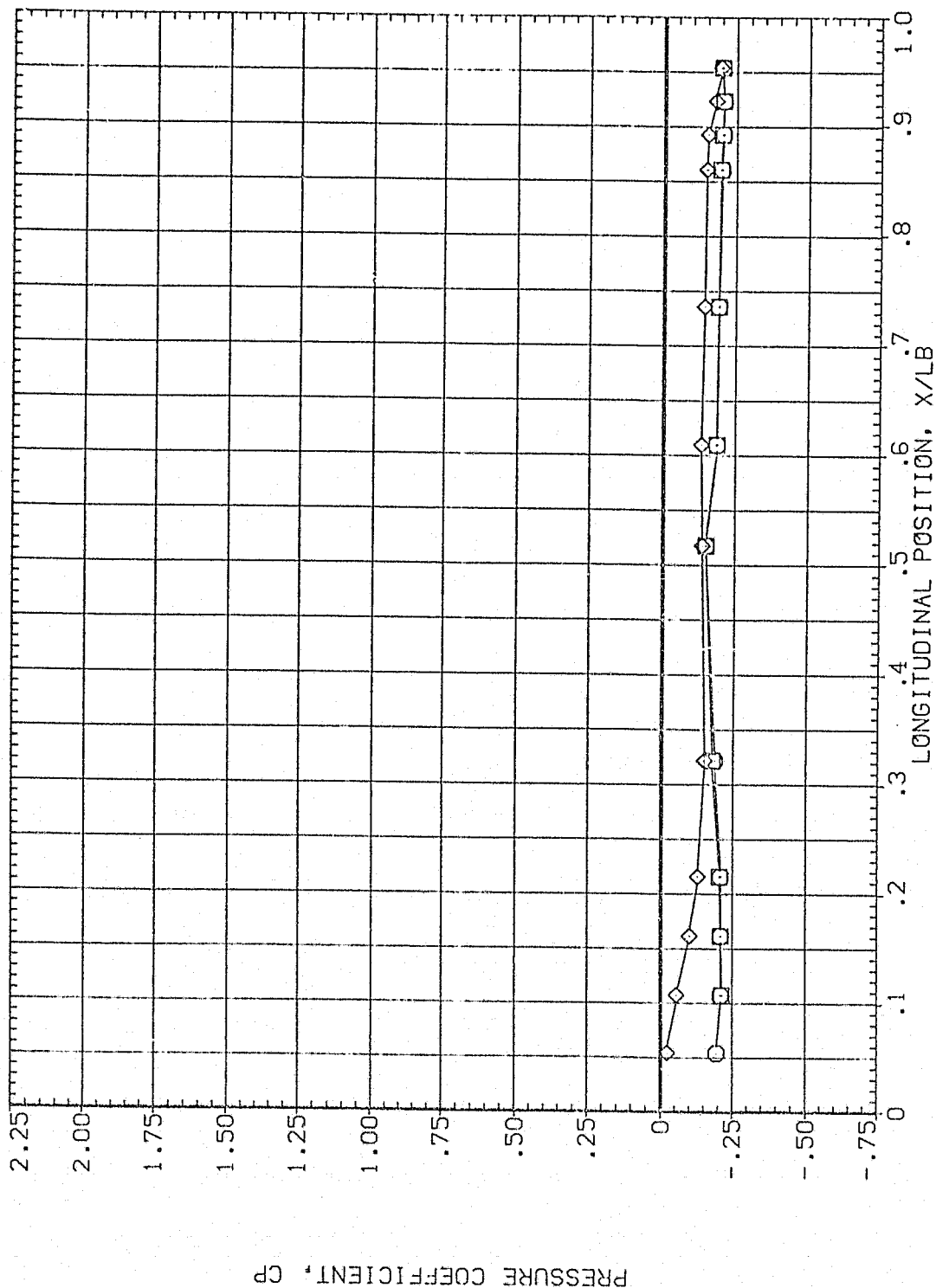


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	66.130	1.970	MOUNT	2.000	60.000
□	135.000					.000
◇	157.500					

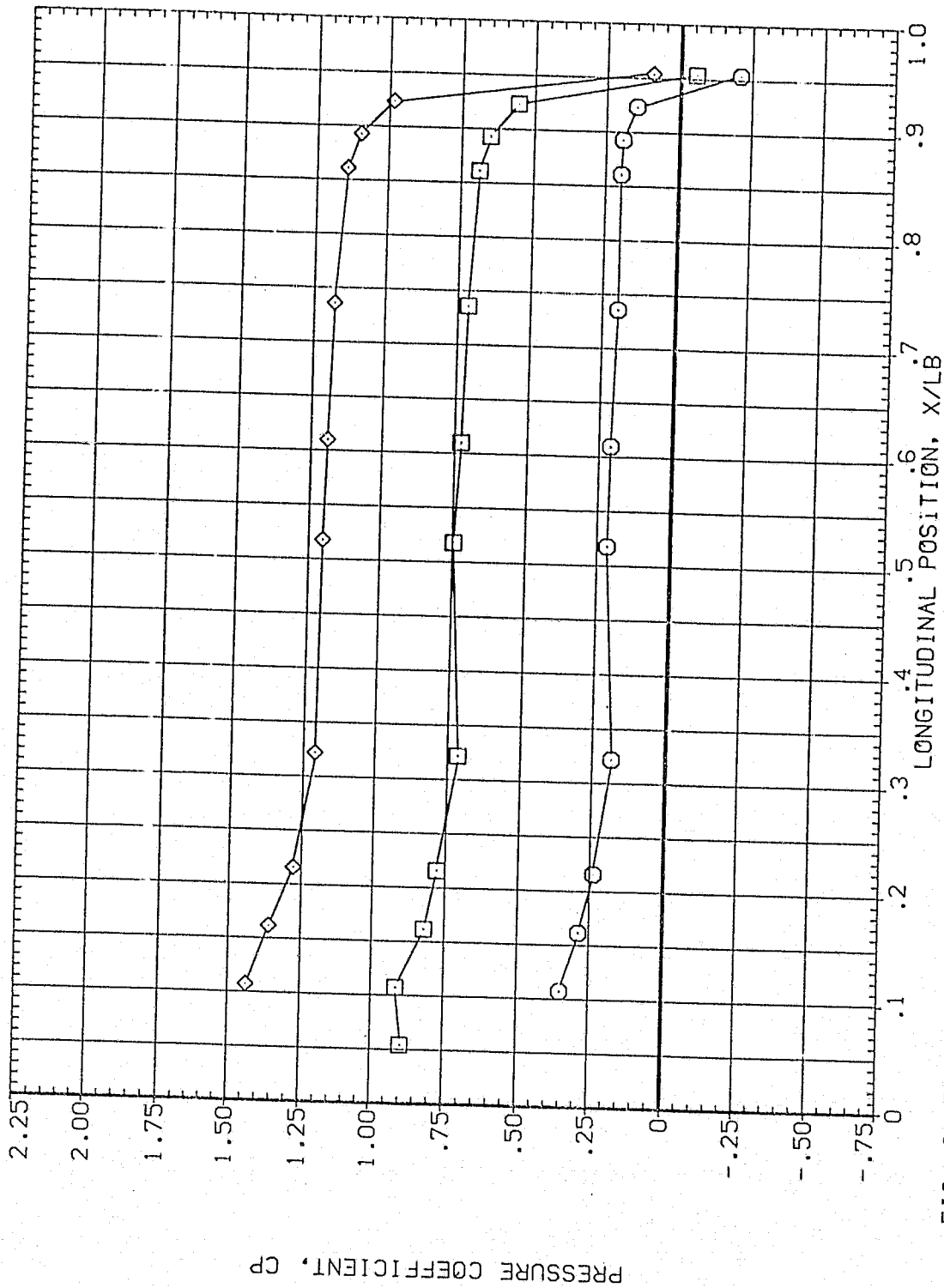


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES
○	180.000	66.130	1.970	BETA .000 OFFSET 60.000
□	202.500			2.000 PHI .000
◇	225.000			

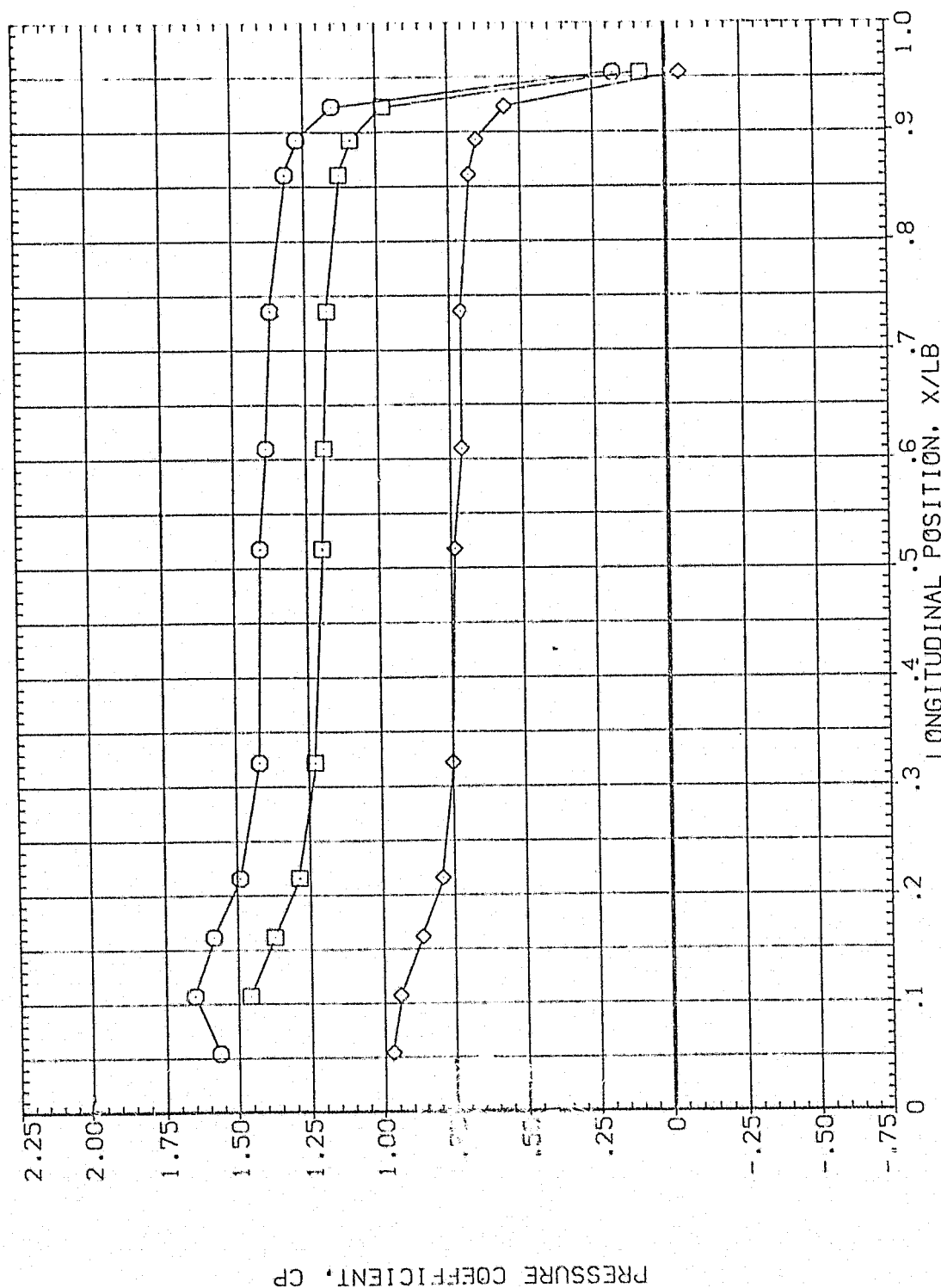


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	66.130	1.970	MOUNT	.000
□	270.000			PHI	2.000
◇	292.500				60.000
					.000

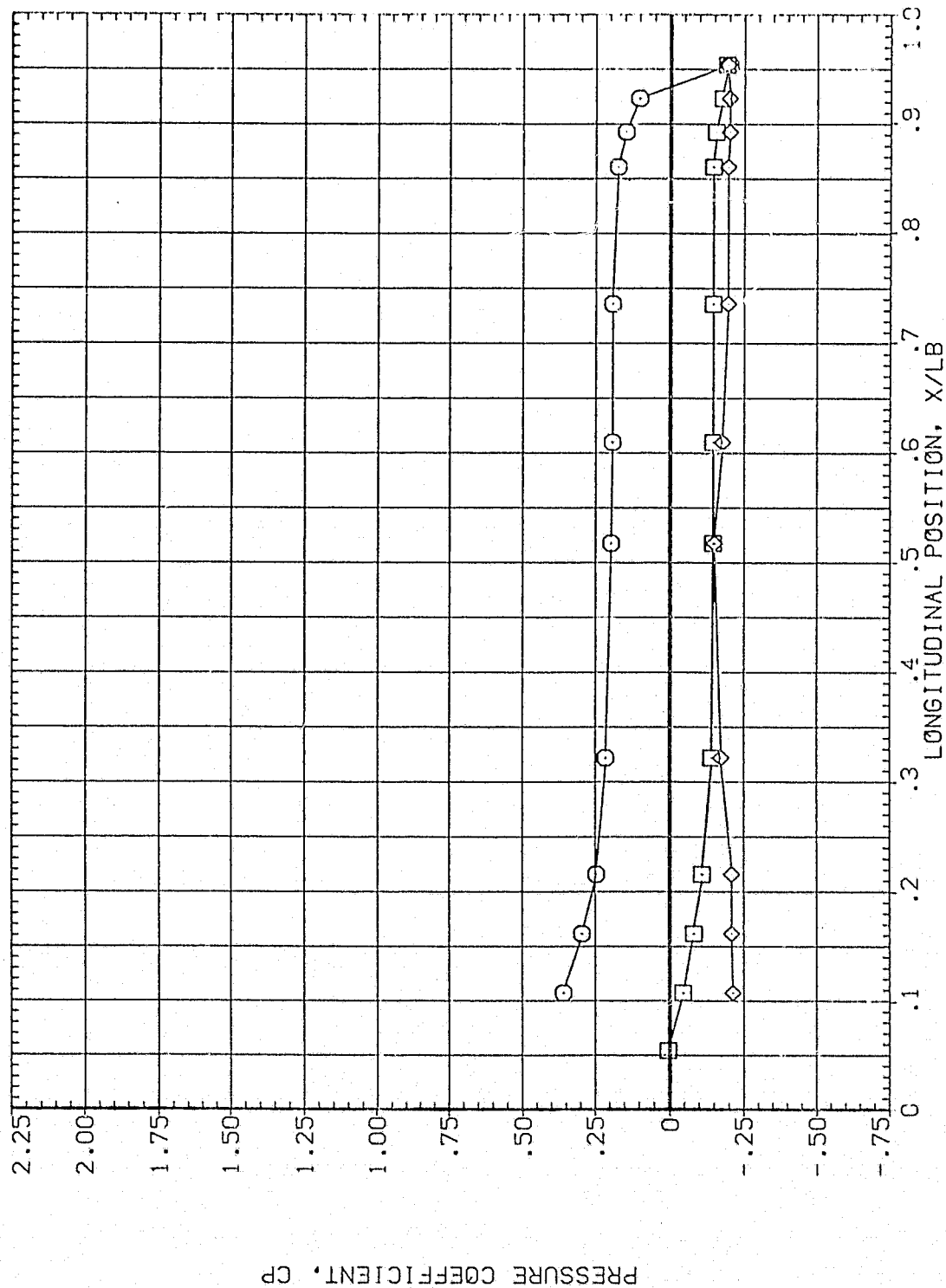


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL THETA ALPHA MACH
 O 315.000 66.130 1.970
 □ 326.000
 ◇ 346.000

PARAMETRIC VALUES
 BETA .000
 MOUNT 2:000
 OFFSET PHI 60.000
 .000

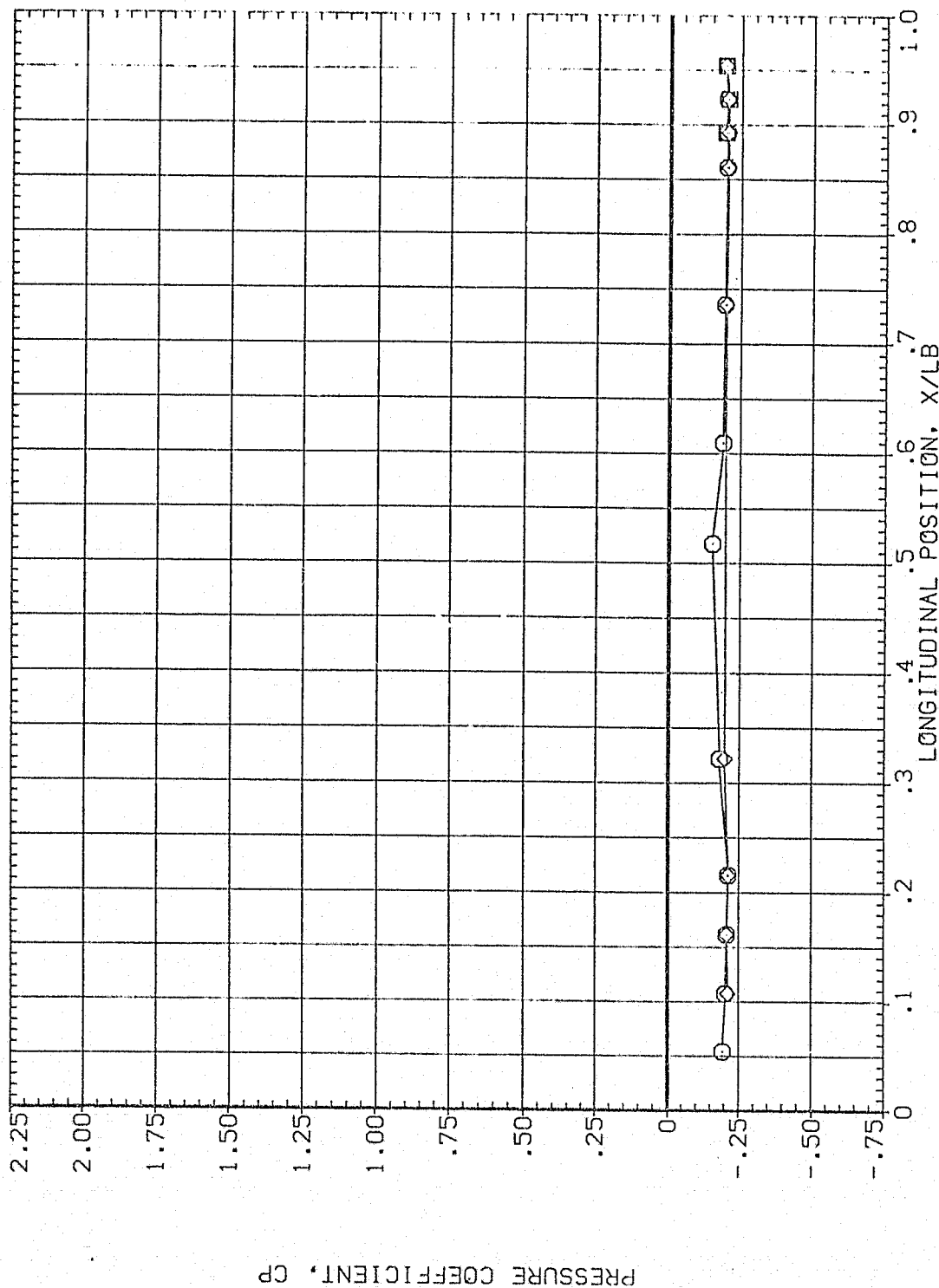


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET .000
 PHI .000

SYMBOL THETA ALPHA MACH
 ○ .000 69.130 1.970
 □ 14.000
 ◇ 24.000

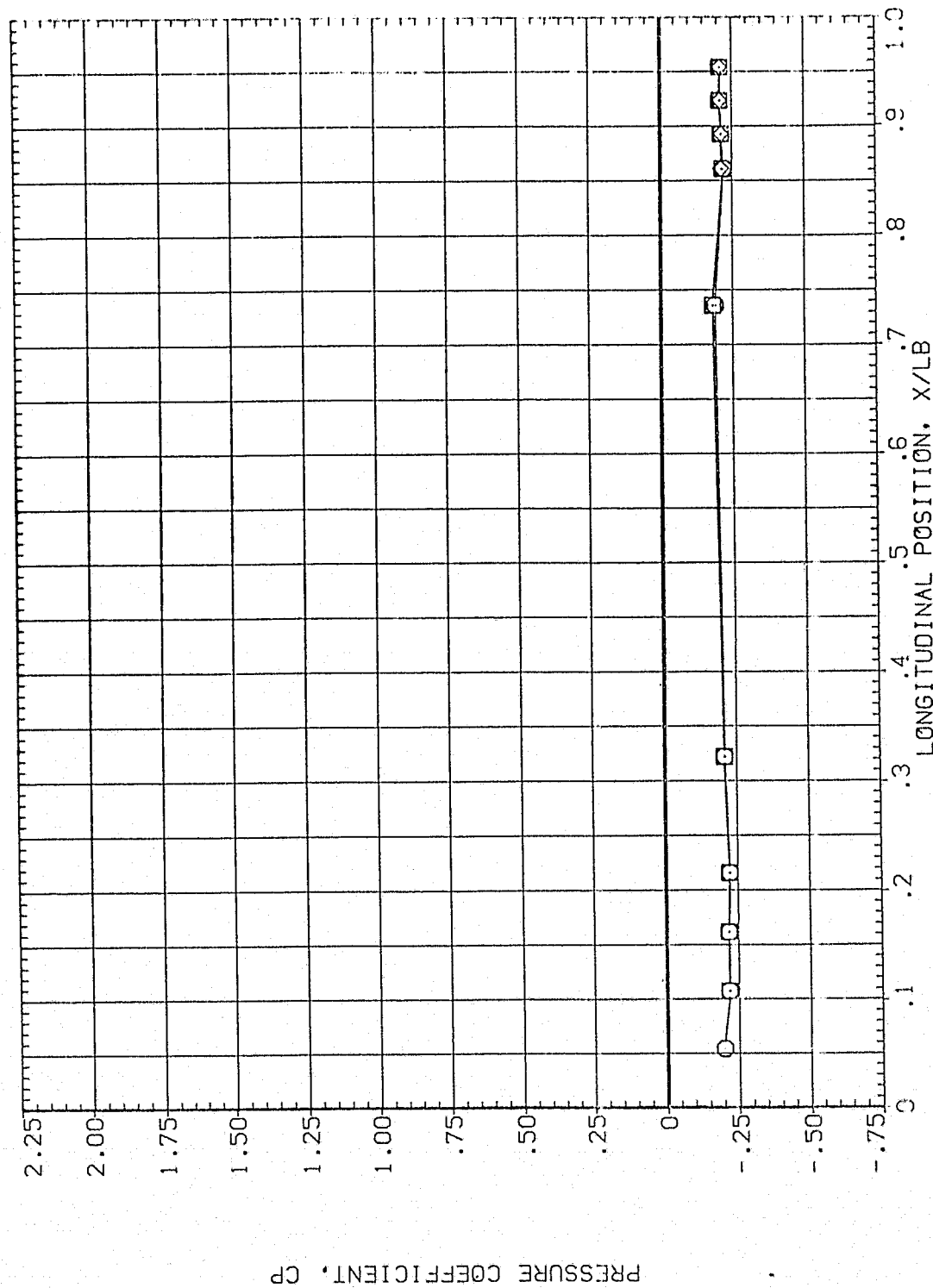


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
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SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	69.130	1.970	MOUNT	.000 OFFSET
□	67.500				2.000 PHI
◇	90.000				60.000

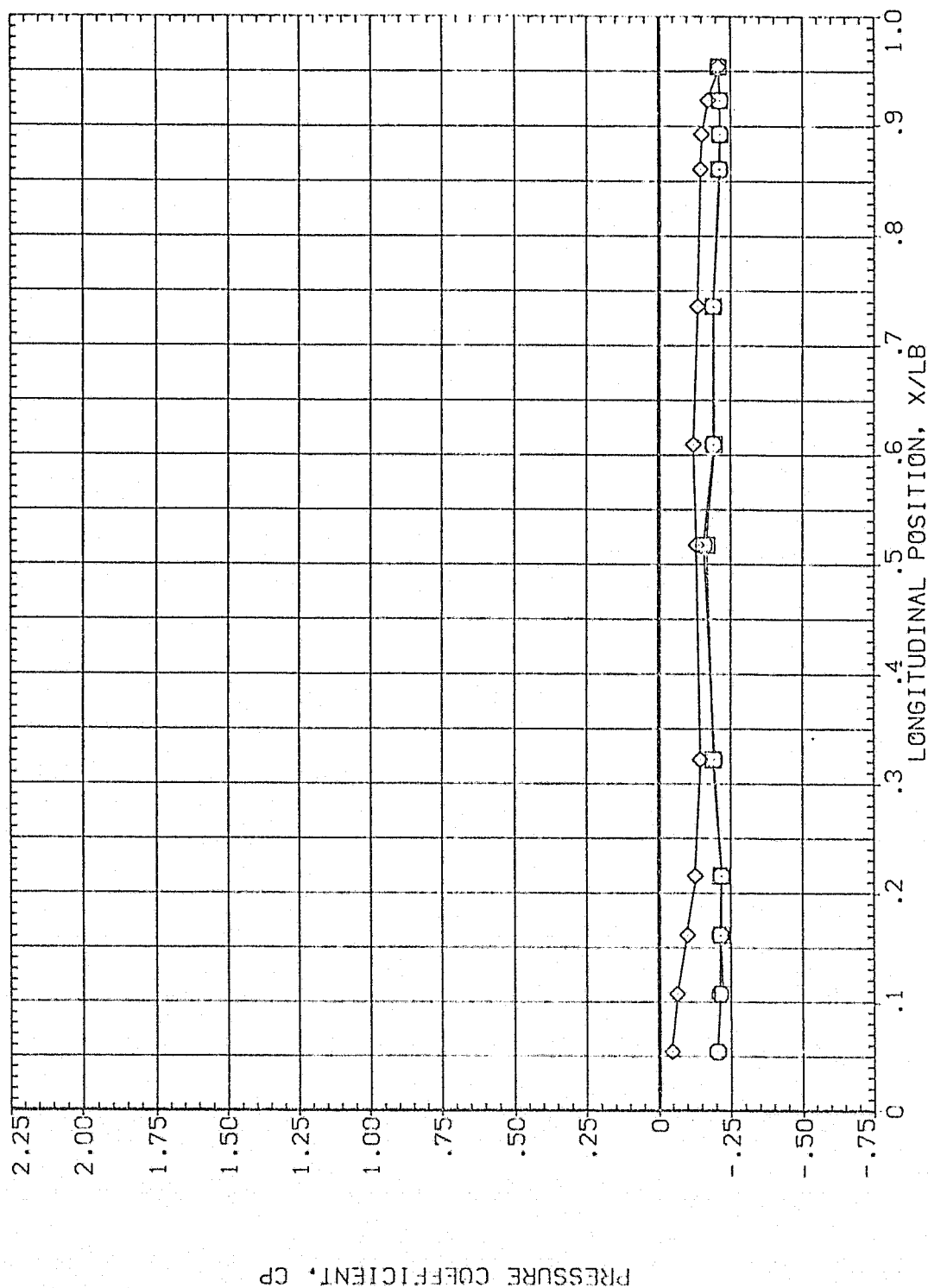


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	112.500	135.000	69.130	1.970			BETA	OFFSET	PHI	
○	157.500						MCUNT	.000	2.000	60.000
□										
◇										

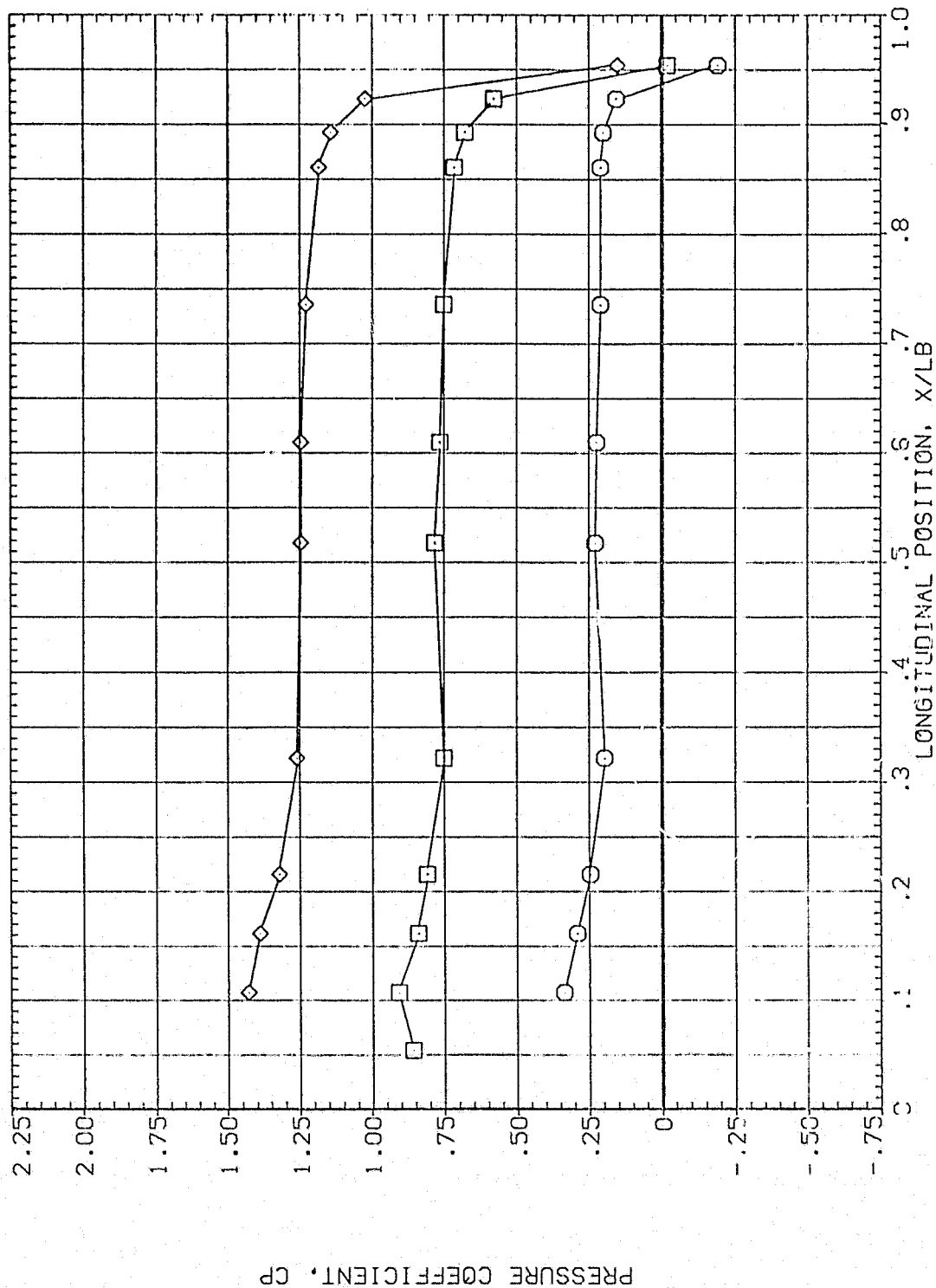


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
○
□
◇

THETA
180.000
202.500
225.000

ALPHA
69.130

MACH
1.970

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
OFFSET
PHI

60.000
.000

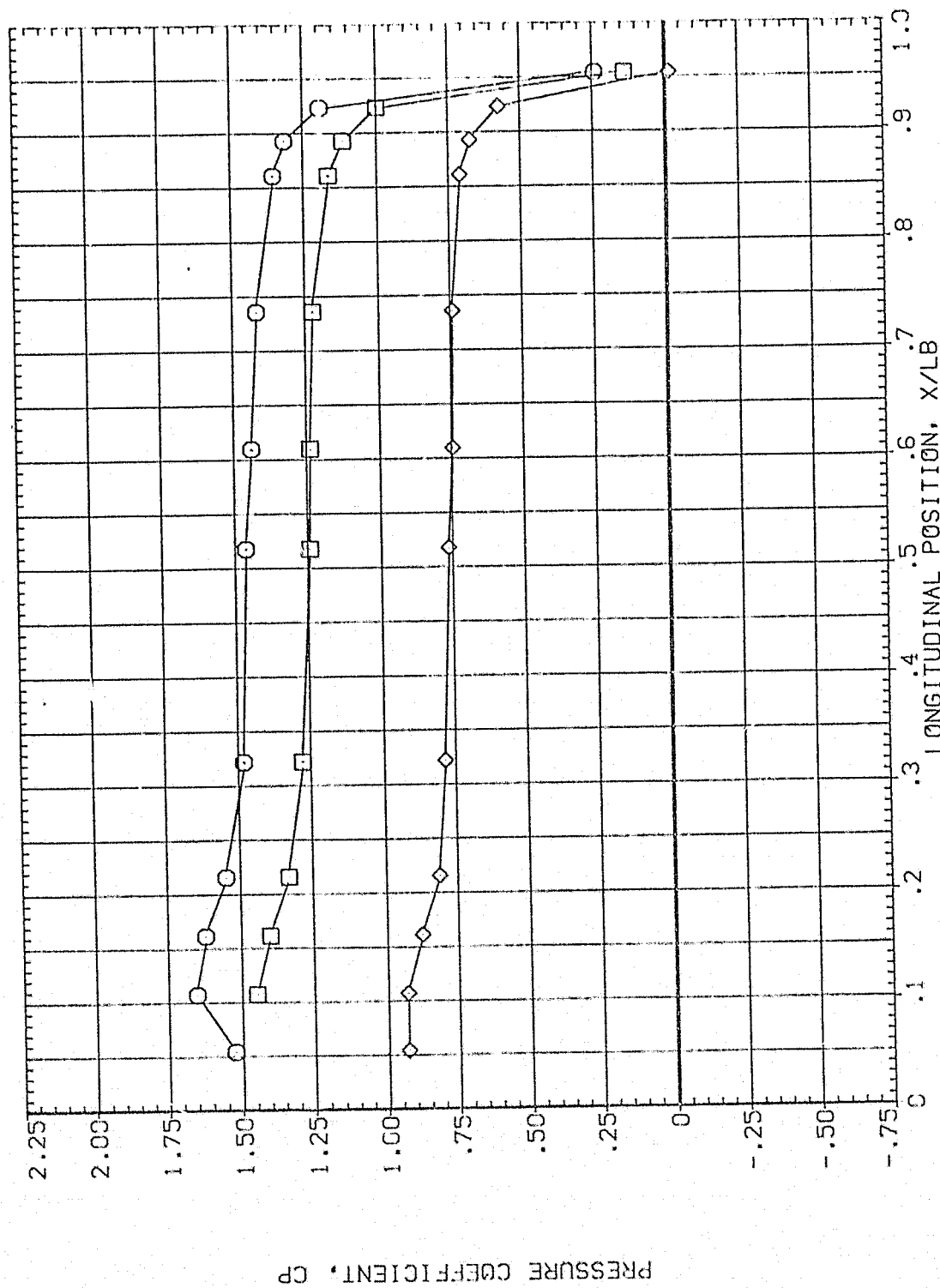


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	247.500		69.130		1.970		BETA		OFFSET	
	270.000						COUNT		PHI	
	292.500									

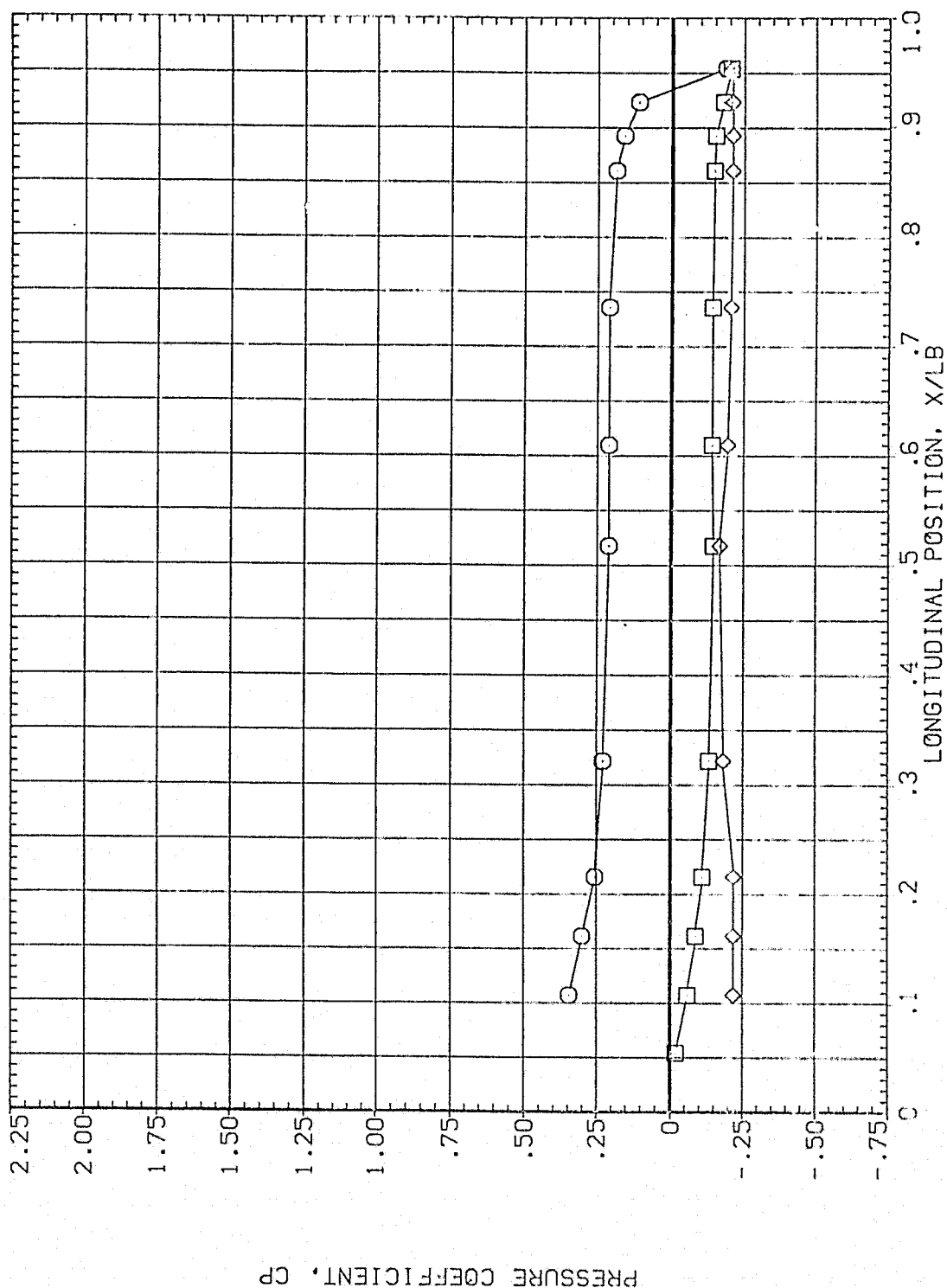


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	69.130	1.970	MOUNT	.000 OFFSET 60.000
□	326.000				2.000 PHI .000
◇	346.000				

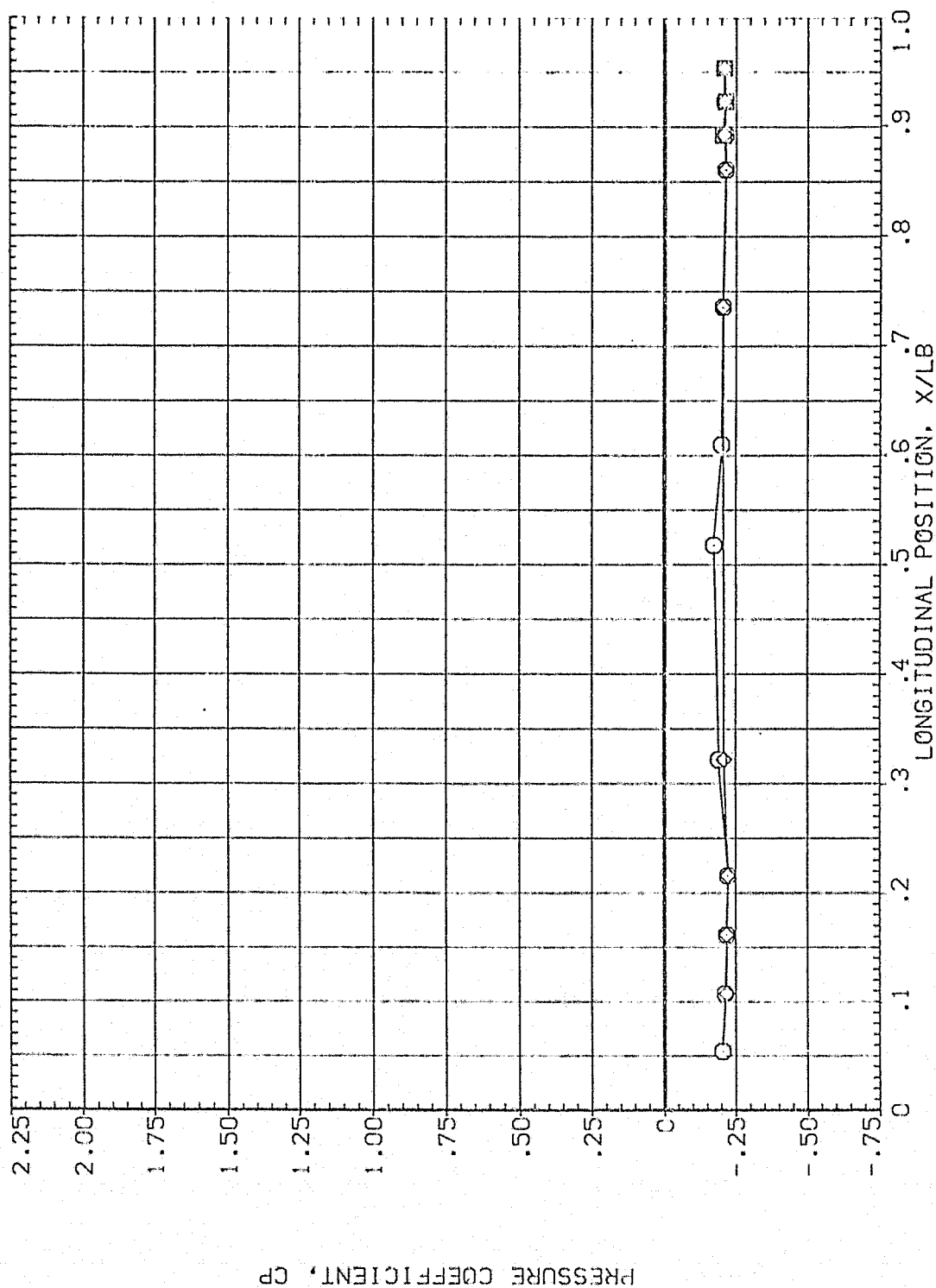


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA068)

SYMBOL	PARAMETRIC VALUES		
	THETA	ALPHA	MACH
○	.000	69.960	1.960
□	14.000		
◇	24.000		
		BETA	
		MOUNT	
		.000	80.000
		2.000	.000
		PHI	

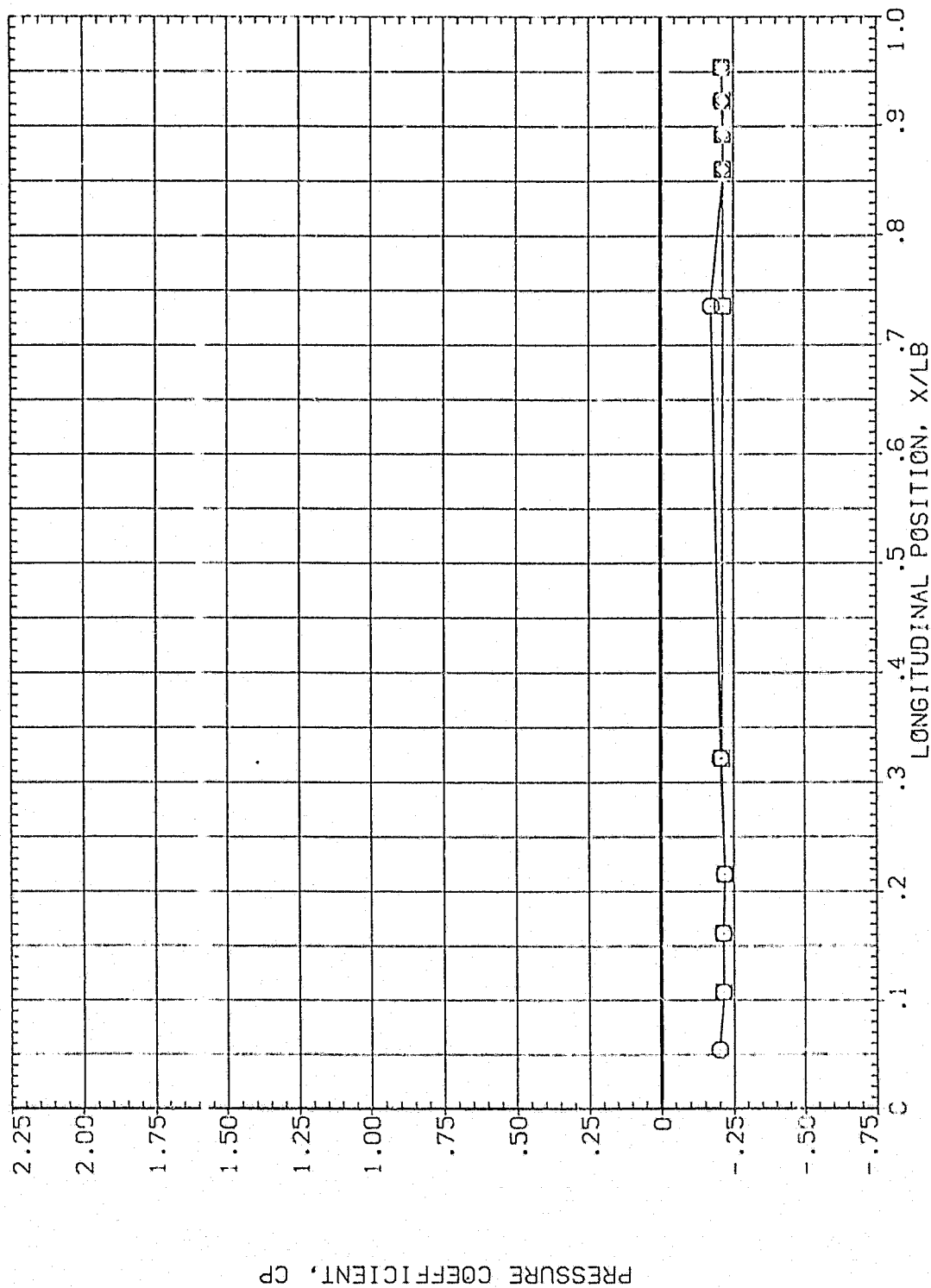


FIG. 9 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	45.000	59.960	1.960	MOUNT	.000
◇	67.500			PHI	2.000
	90.000				80.000

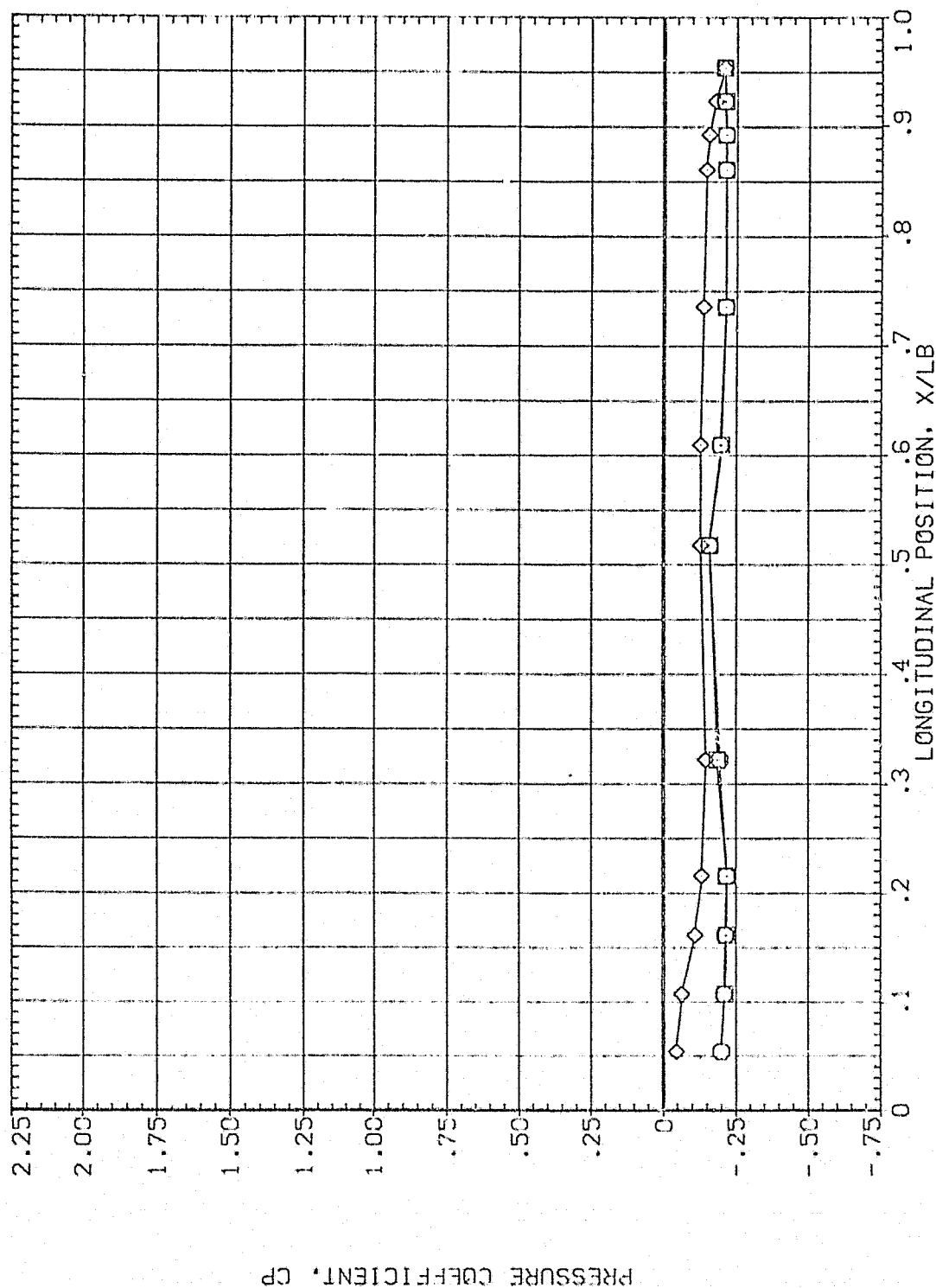


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	THETA		ALPHA	MACH	PARAMETRIC VALUES		
	112.500	135.000			BETA	OFFSET	80.000
○	157.500		69.960	1.960	RCOUNT	PHI	.000

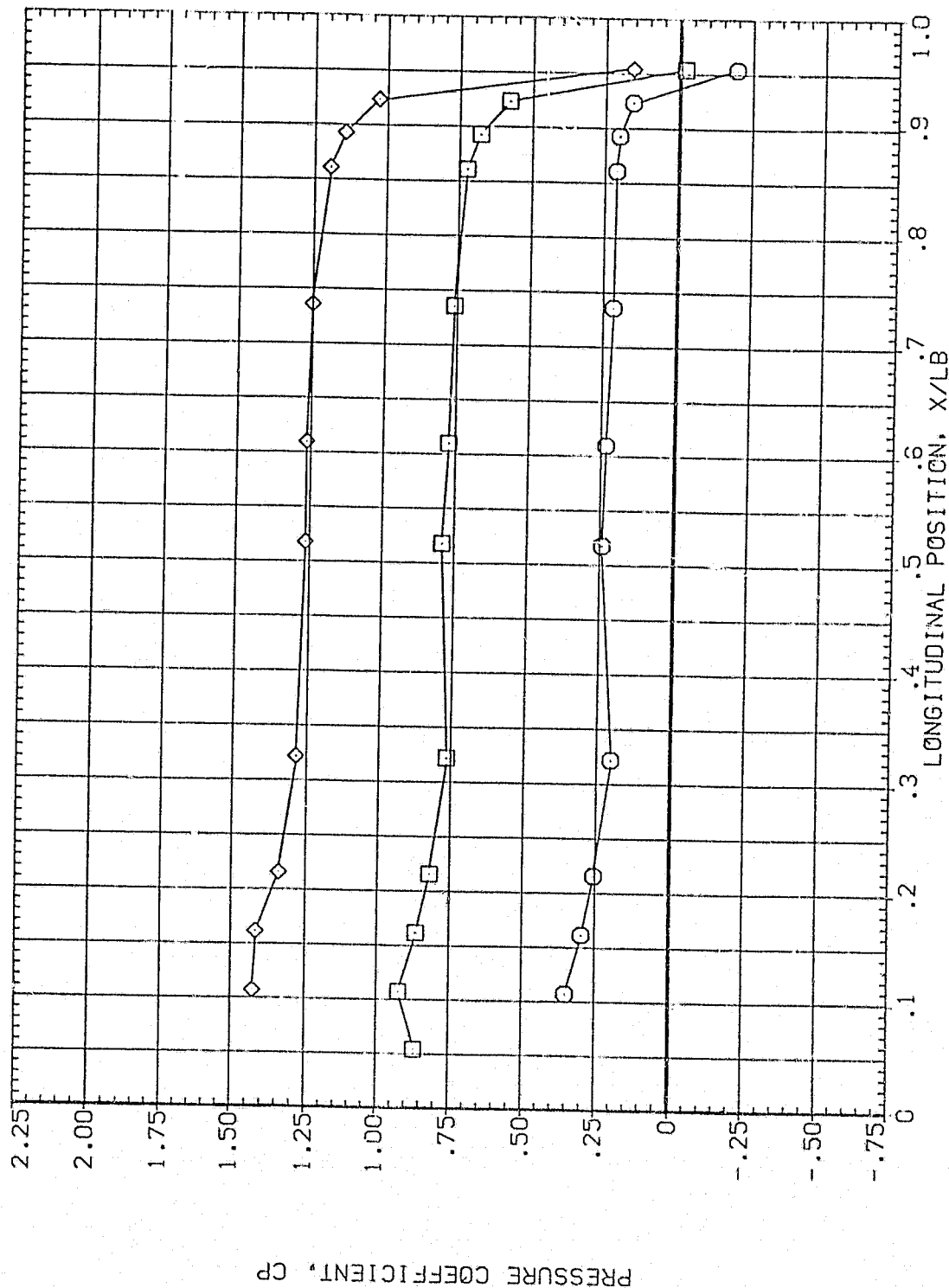


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	180.000	69.960	1.960	2.000	.000	.000
□	202.500					
◇	225.000					

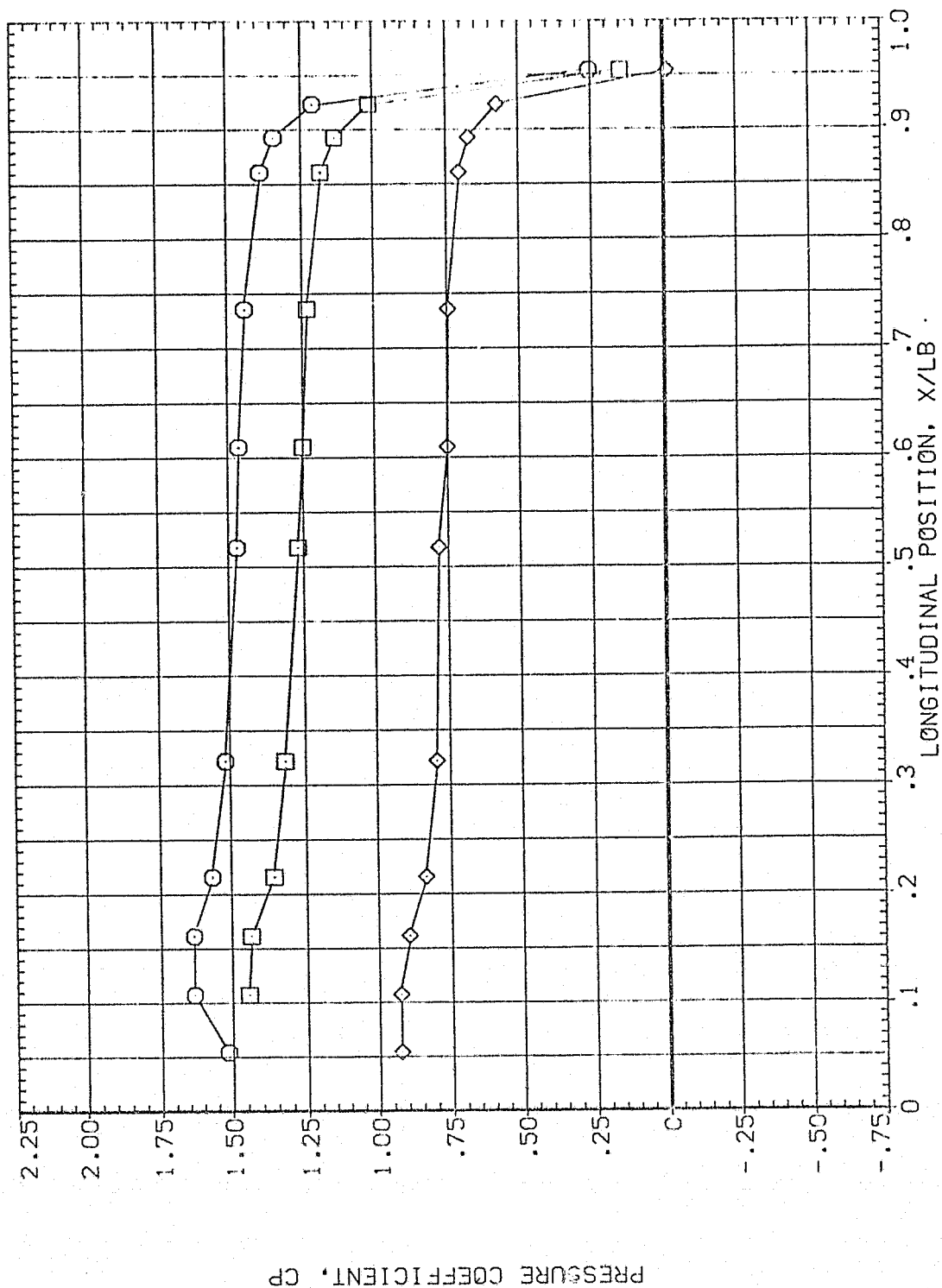


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	69.960	1.960	80.000		
□	270.000			2.000		
◇	292.500					

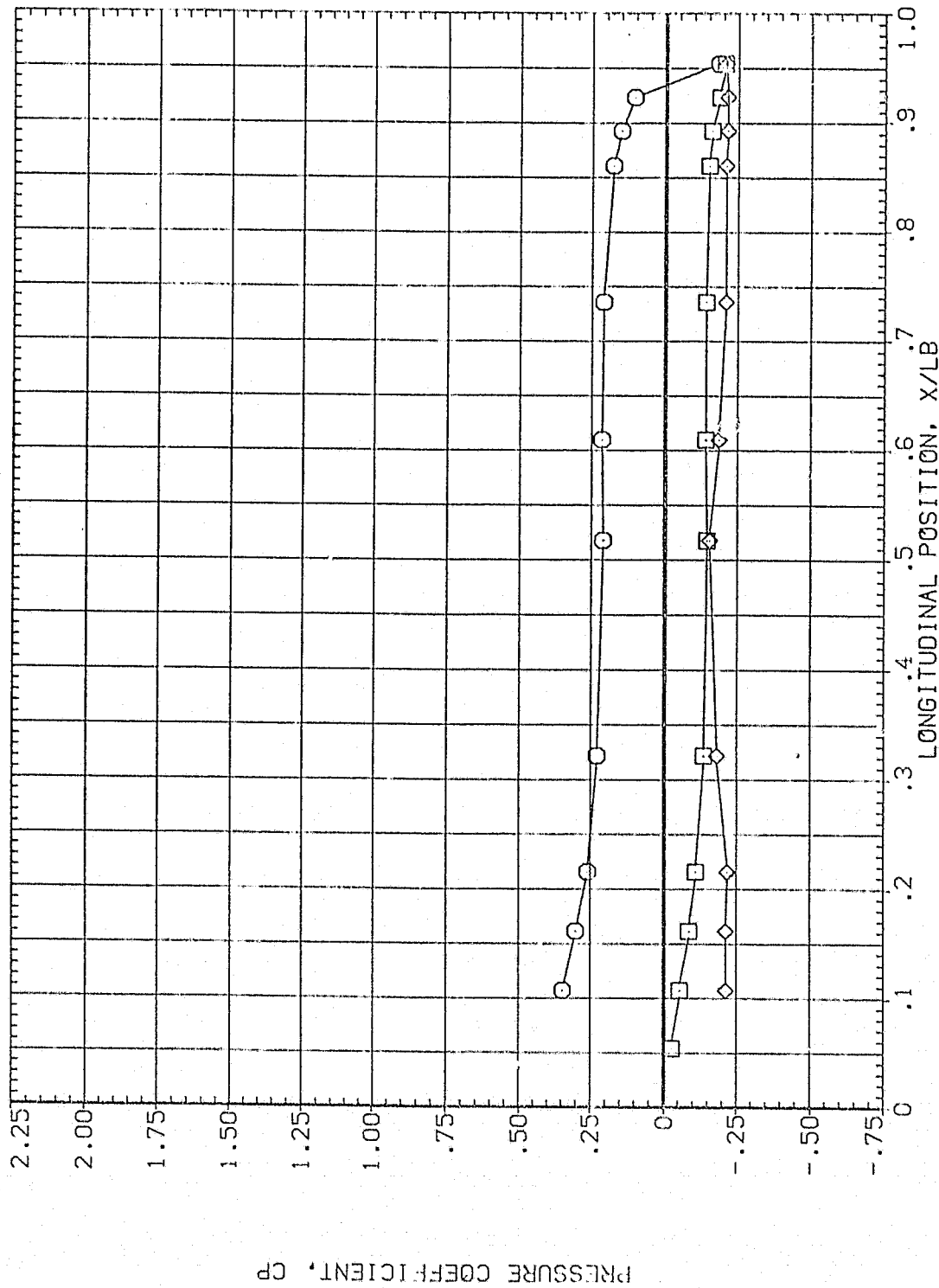


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL THETA ALPHA MACH
 ○ 315.000 69.960 1.960
 □ 326.000
 ◇ 346.000

PARAMETRIC VALUES
 BETA .000 OFFSET 80.000
 MCUNT 2.000 PHI .000

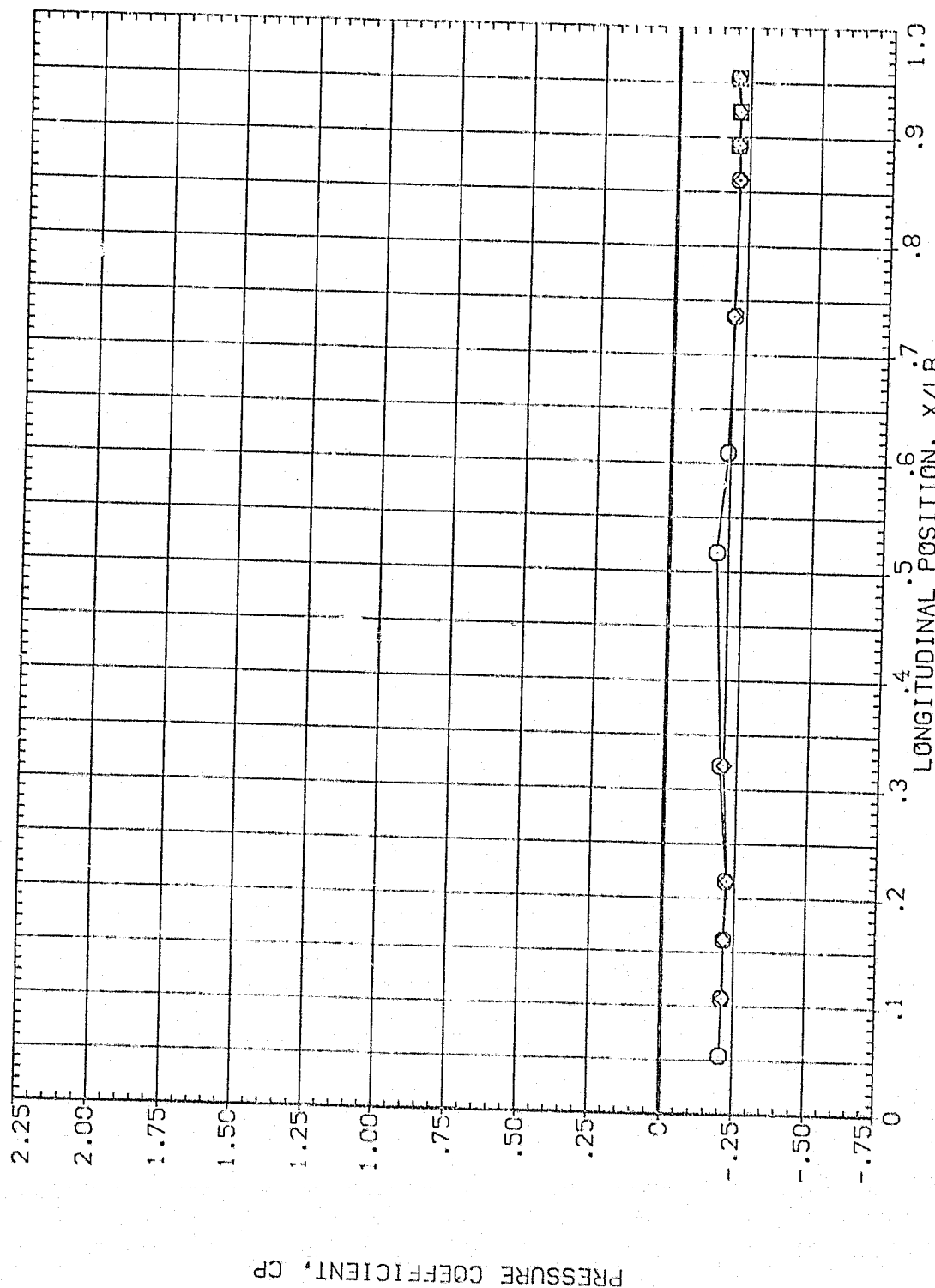


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
 O
 □
 ◇

THETA .000
 14.000
 24.000

ALPHA 71.880

MACH 1.960

BETA .000
 %GUNT 2.000

PARAMETRIC VALUES
 OFFSET 80.000
 PHI .000

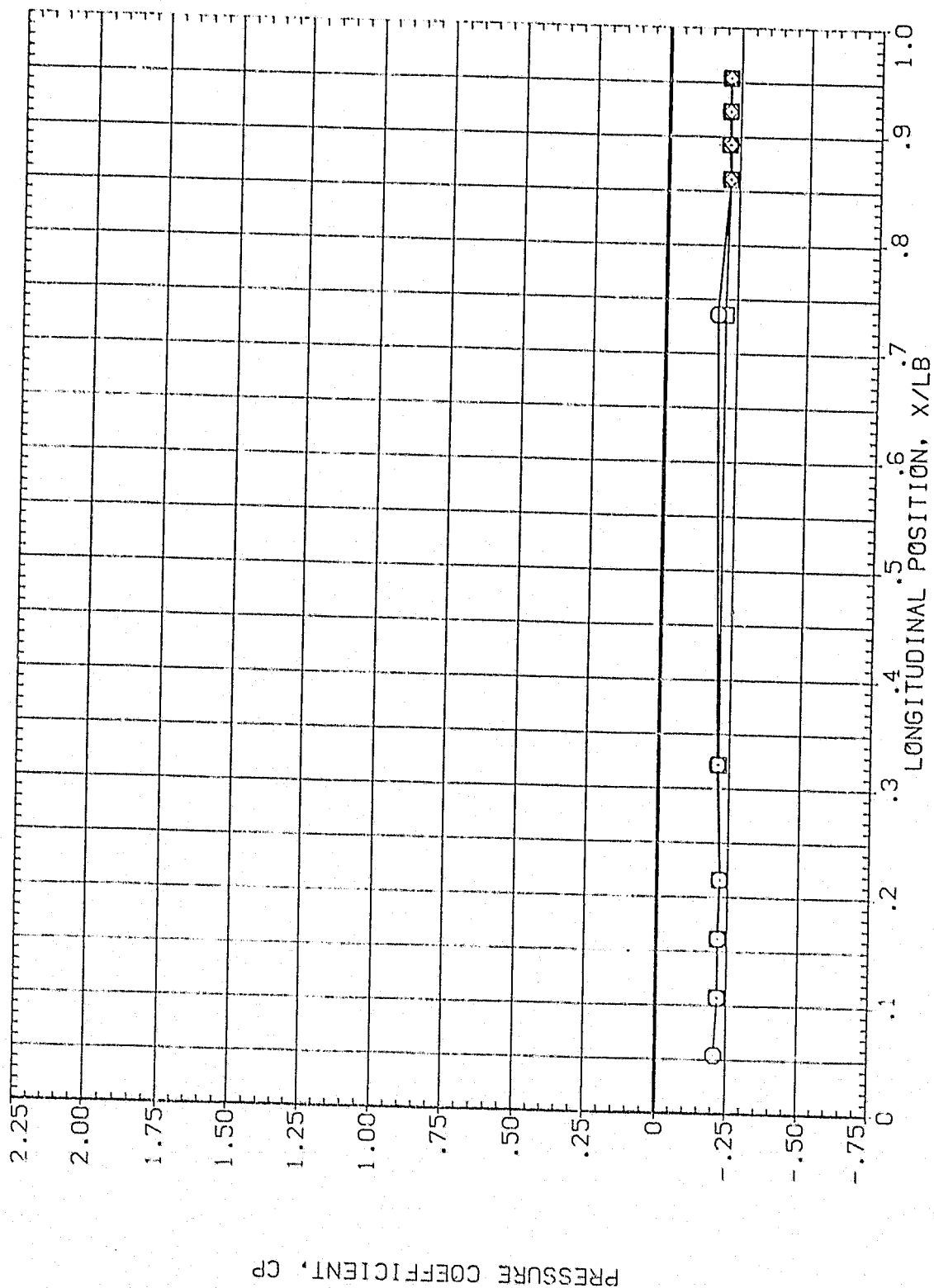


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL

THETA
45.000
67.500
90.000

ALPHA
71.980

MACH
1.960

PARAMETRIC VALUES

.000 CFFSET

2.000 PHI

BETA
MOUNT

80.000

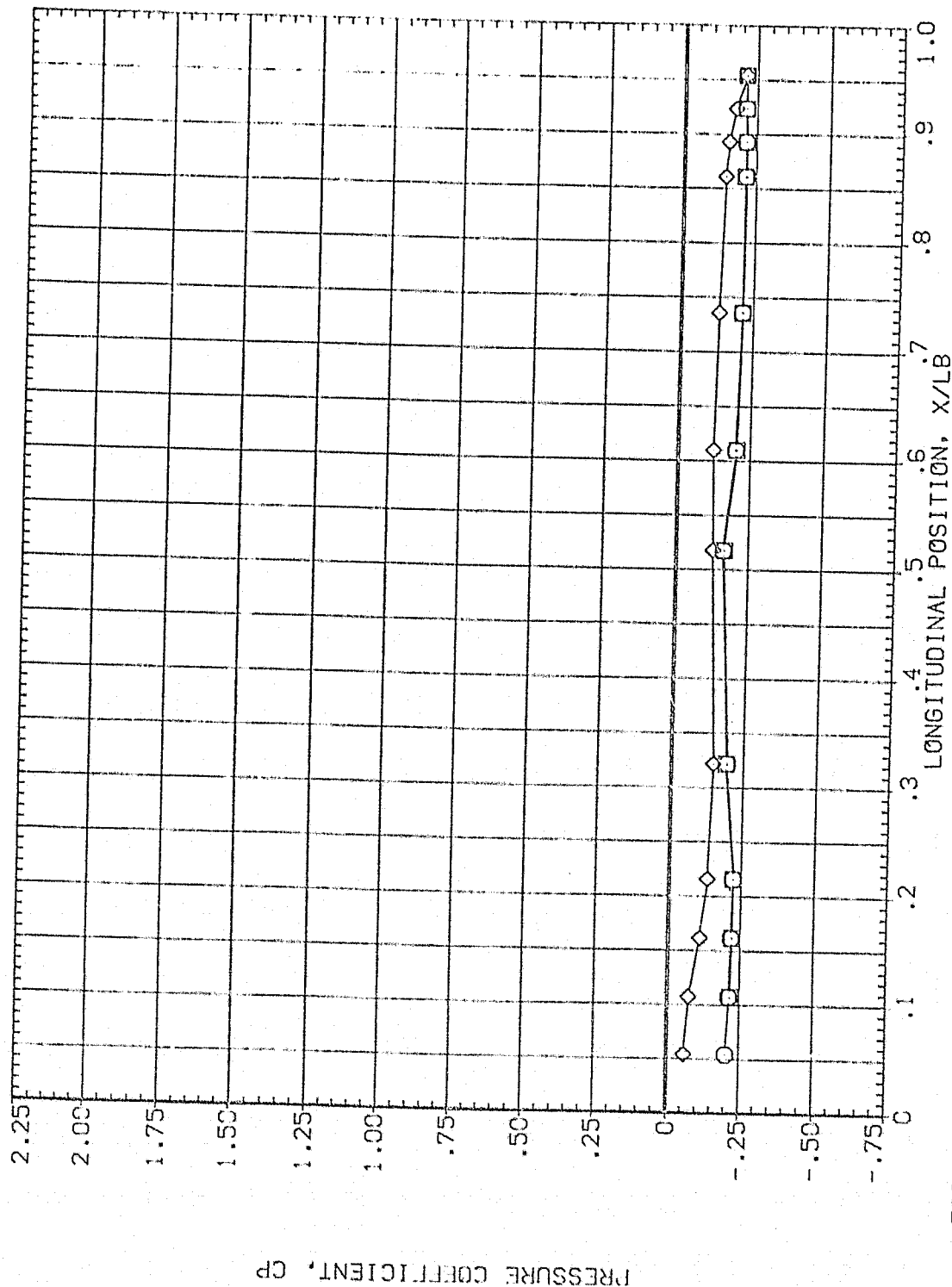


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A069)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	71.880	1.960	MOUNT	.000	.000
□	135.000				2.000	
◇	157.500					

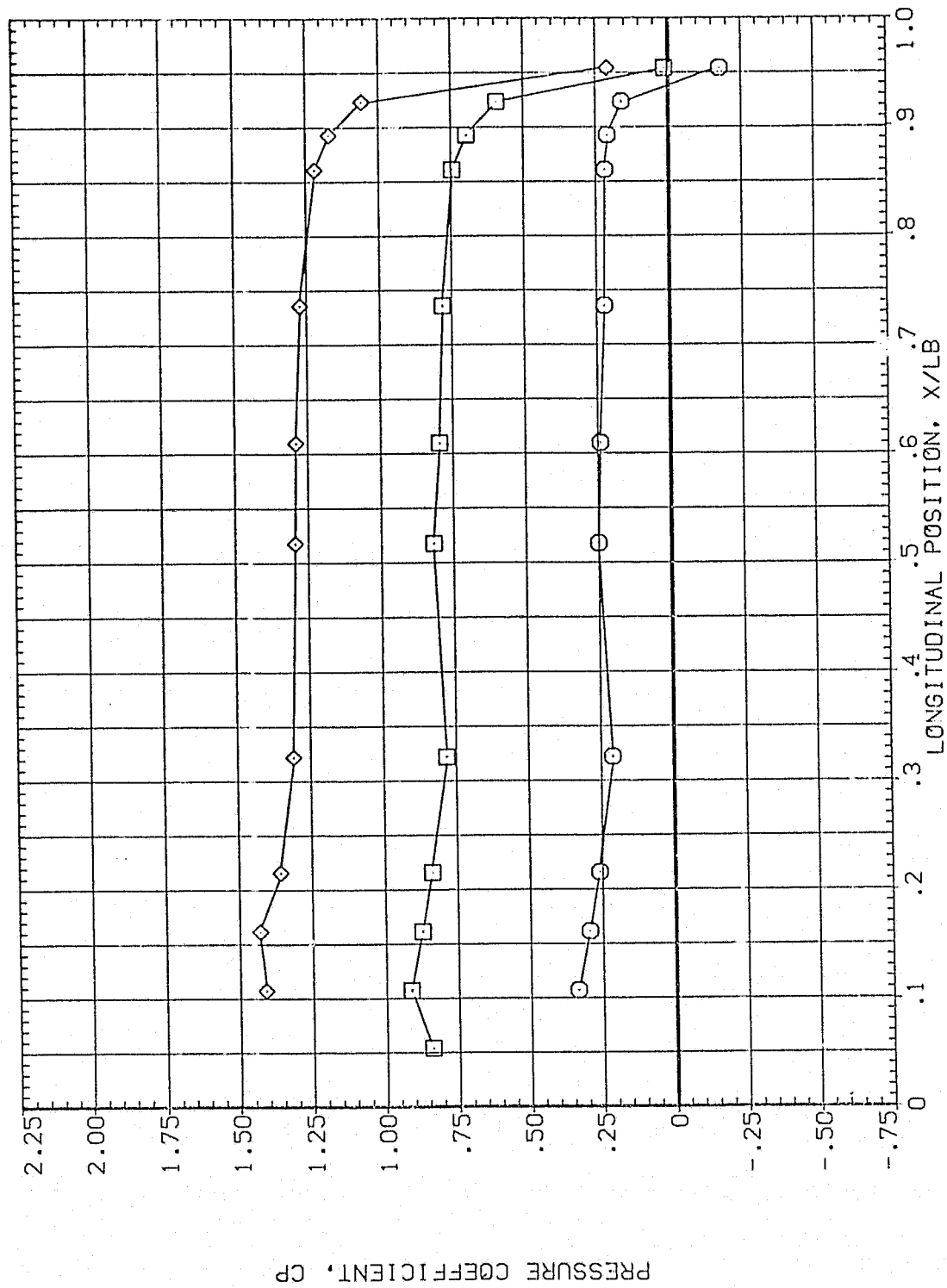


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAFETRIC VALUES
○	180.000	71.880	1.960	MOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				80.000
					.000

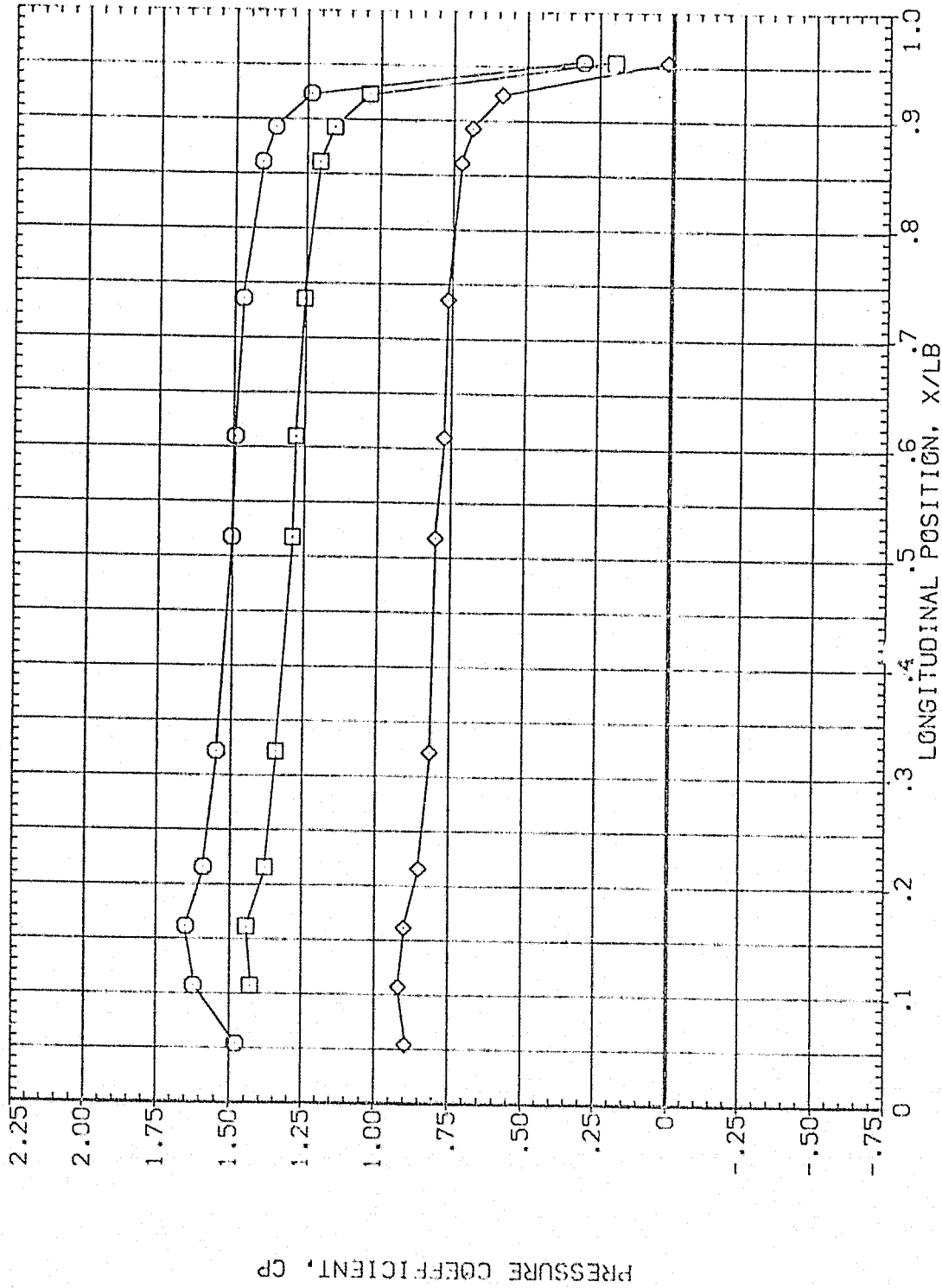


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 BETA .000 CFFSET 80.000
 MOUNT 2.000 PHI .000

ALPHA 71.880 MACH 1.960

SYMBOL THETA
 ○ 247.500
 □ 270.000
 ◇ 292.500

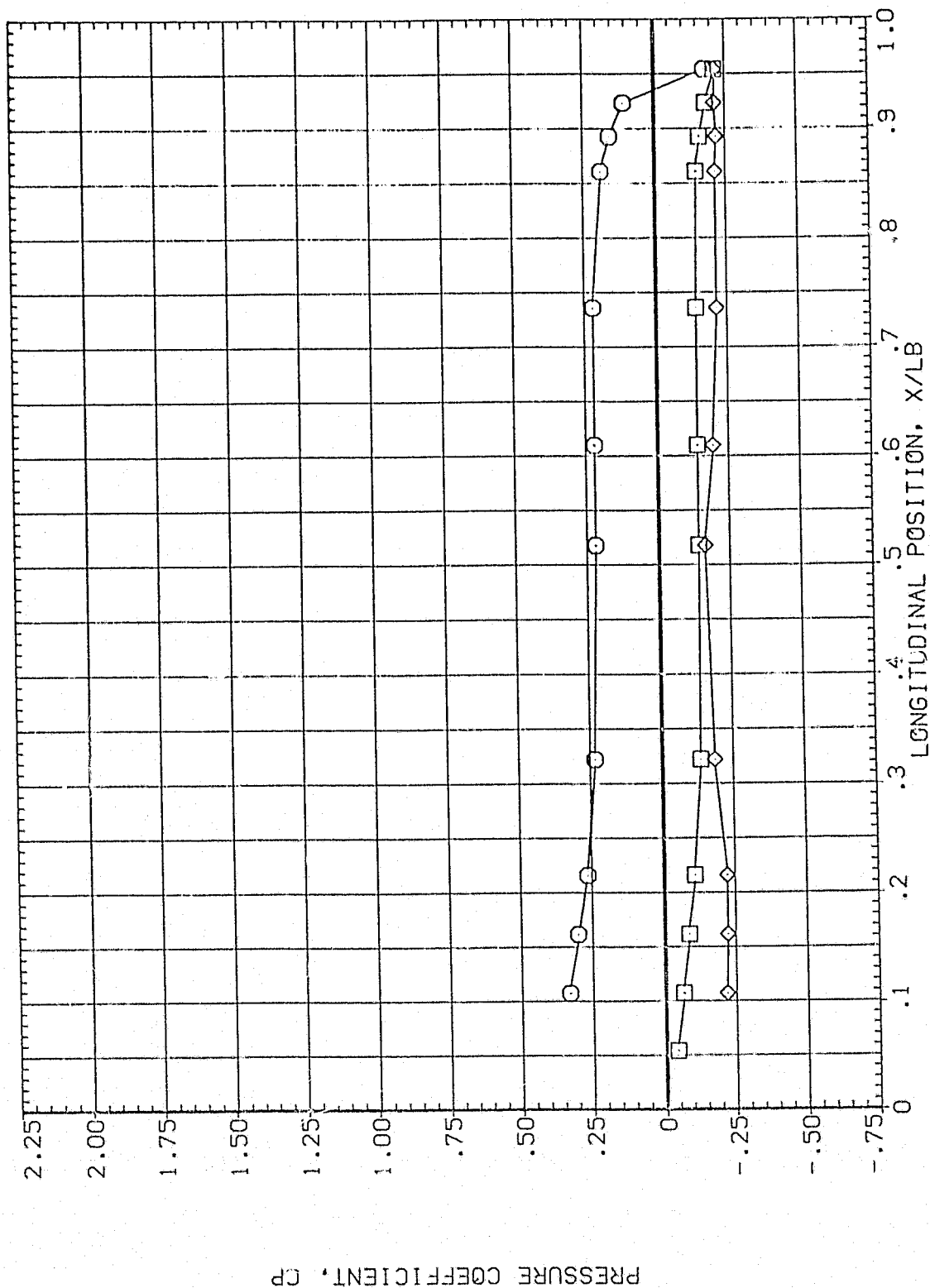


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
 ORIGINAL PAGE IS POOR

PARAMETRIC VALUES
 BETA .000 OFFSET 80.000
 MOUNT 2.000 PHI .000

SYMBOL THETA ALPHA MACH
 315.000 71.880 1.960
 326.000
 348.000

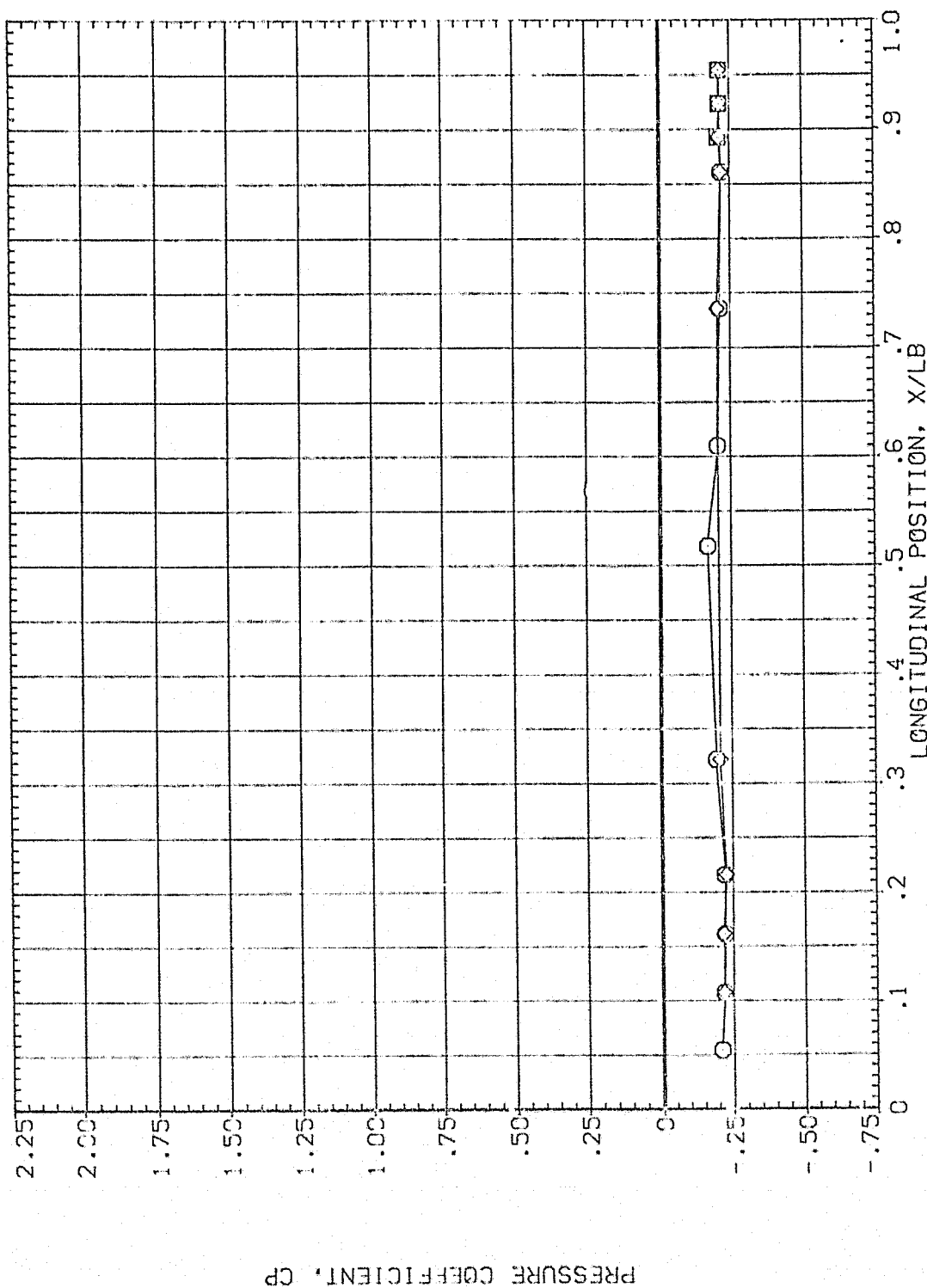


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.000	74.860	1.960	.000	CSESET
□	14.000			2.000	P-1
◇	24.000				

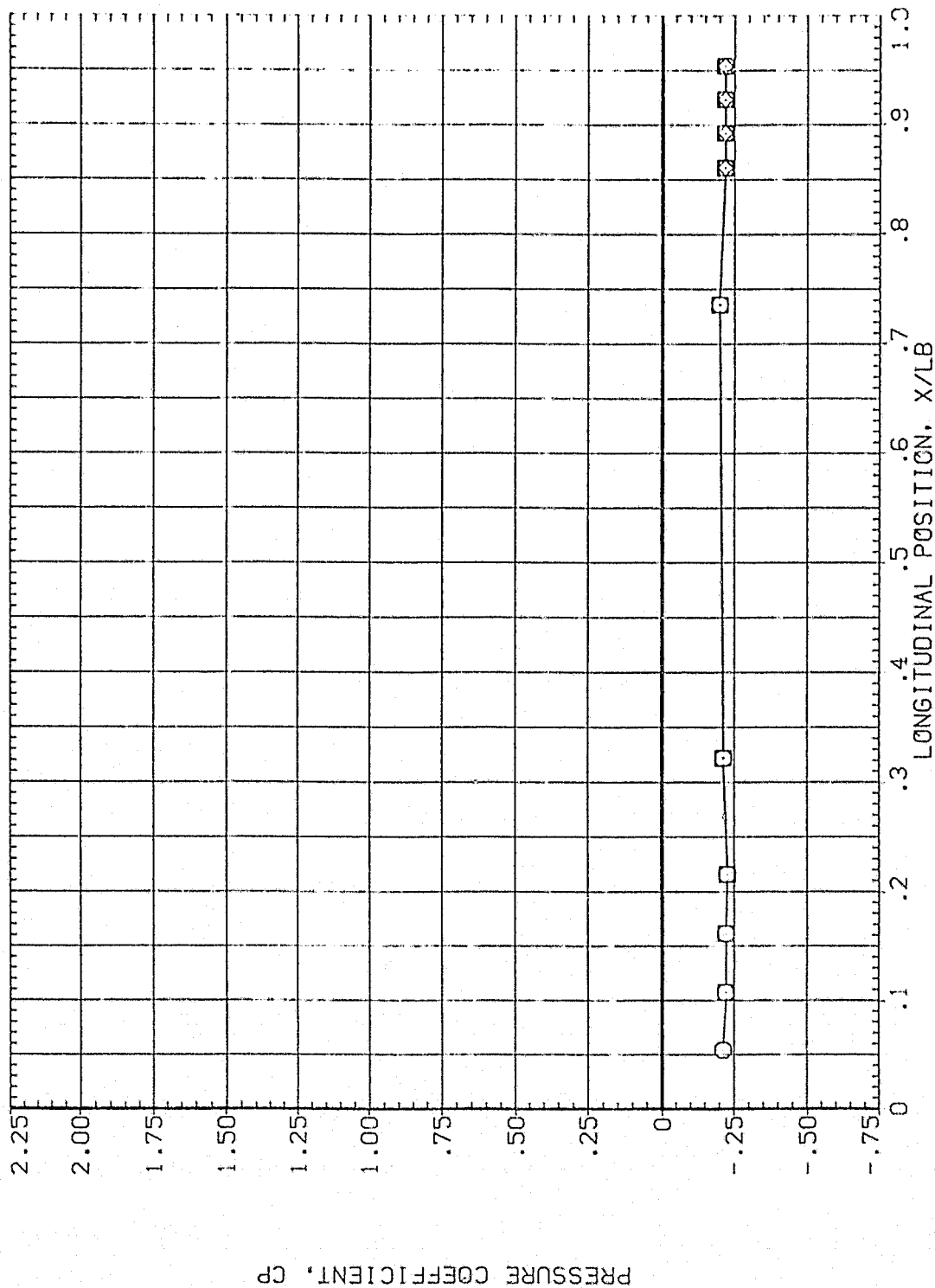


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
 ○
 □
 ◇

THETA
 45.000
 67.500
 90.000

ALPHA
 74.860

MACH
 1.960

BETA
 MOUNT

PARAMETRIC VALUES
 .000 2.000 80.000
 OFFSET PHI

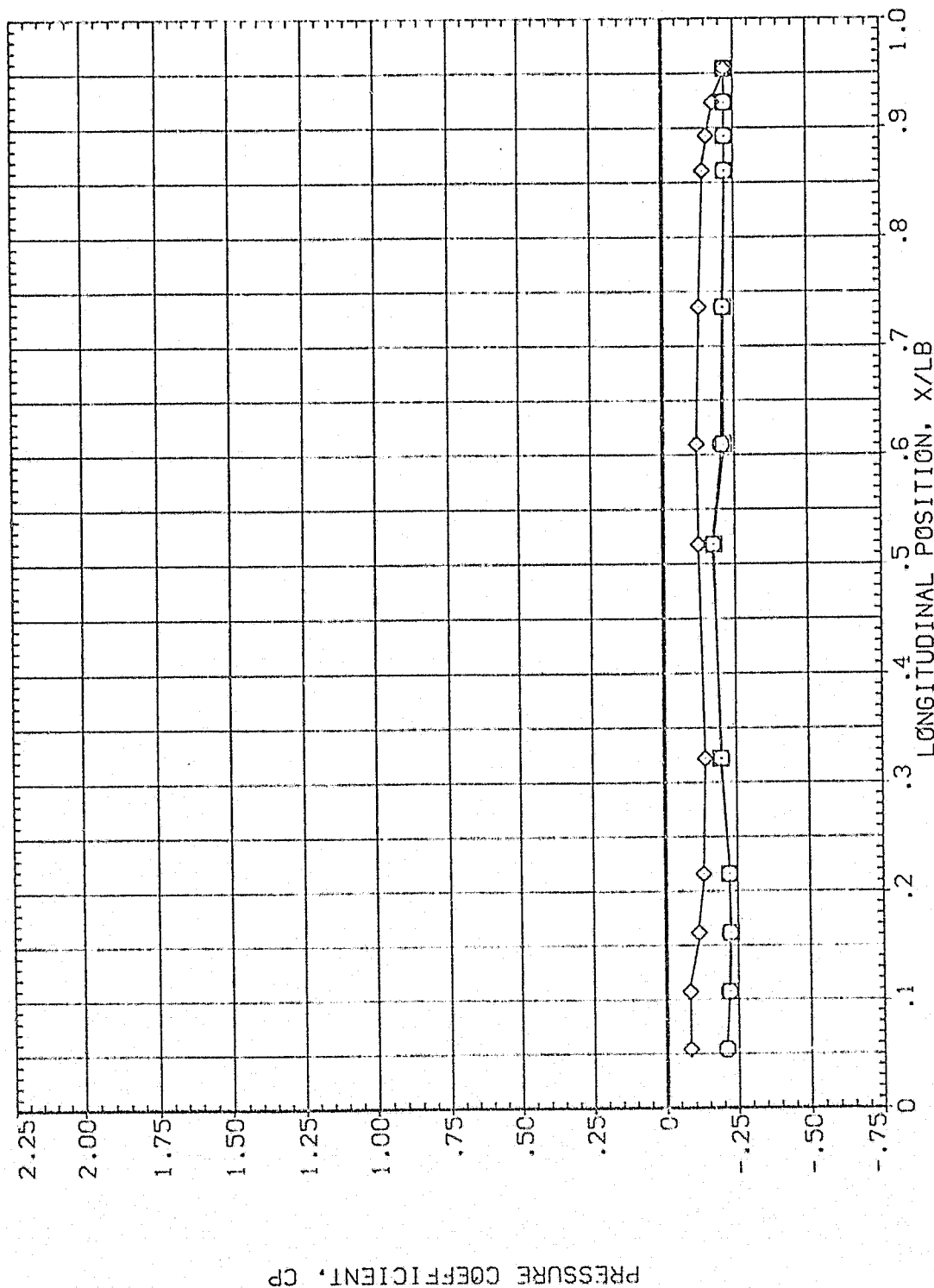


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL	THETA	ALPHA	HACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
◇	112.500	74.860	1.960	MOUNT	.000	80.000
□	135.000				2.000	.000
○	157.500					

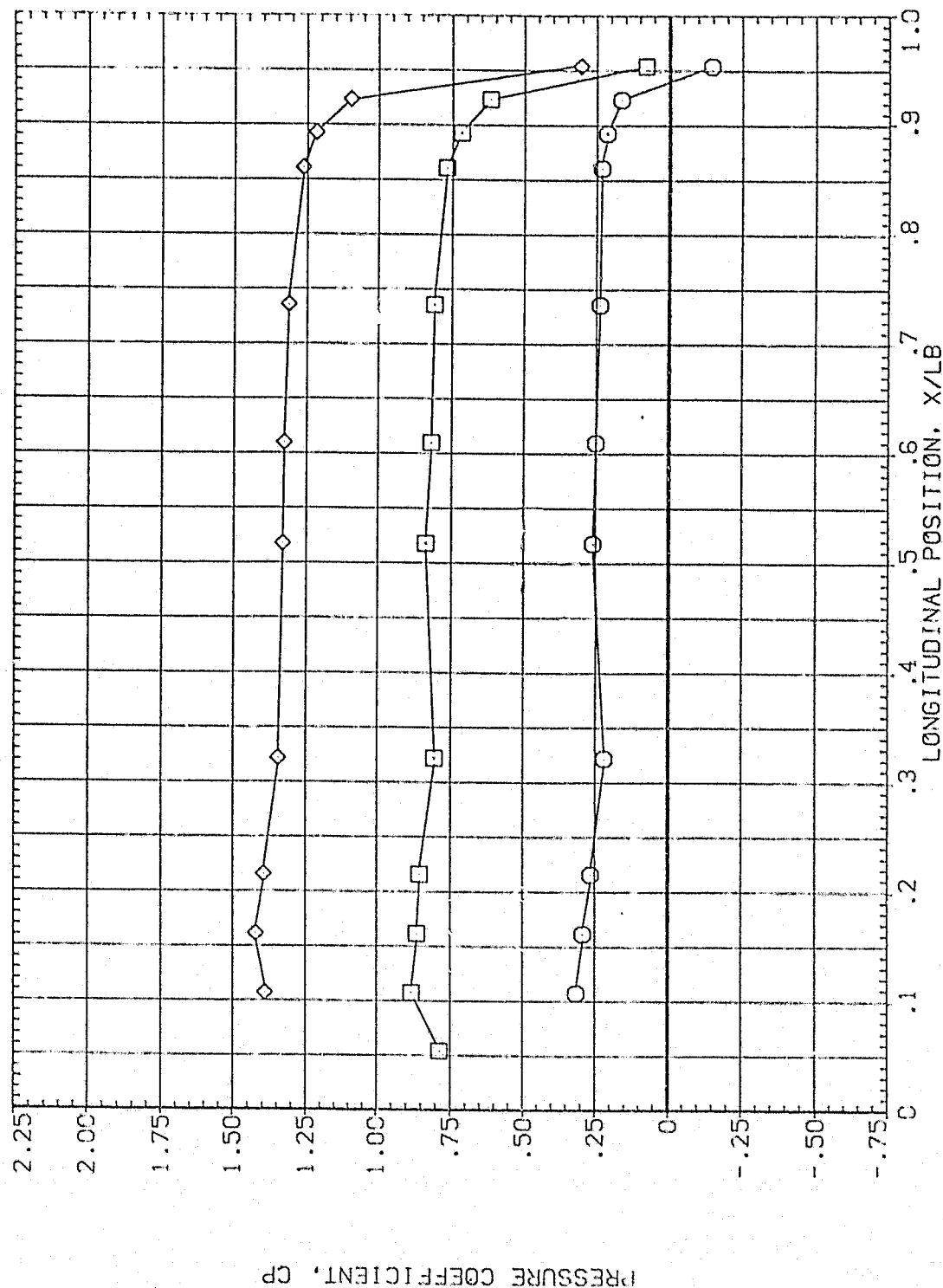


FIG. 3 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

(PIA070)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL
○
□
◇

THETA
180.000
202.500
225.000

ALPHA
74.860

MACH
1.960

BETA
MOUNT

PARAMETRIC VALUES
.000 2.000 80.000
OFFSET PHI .000

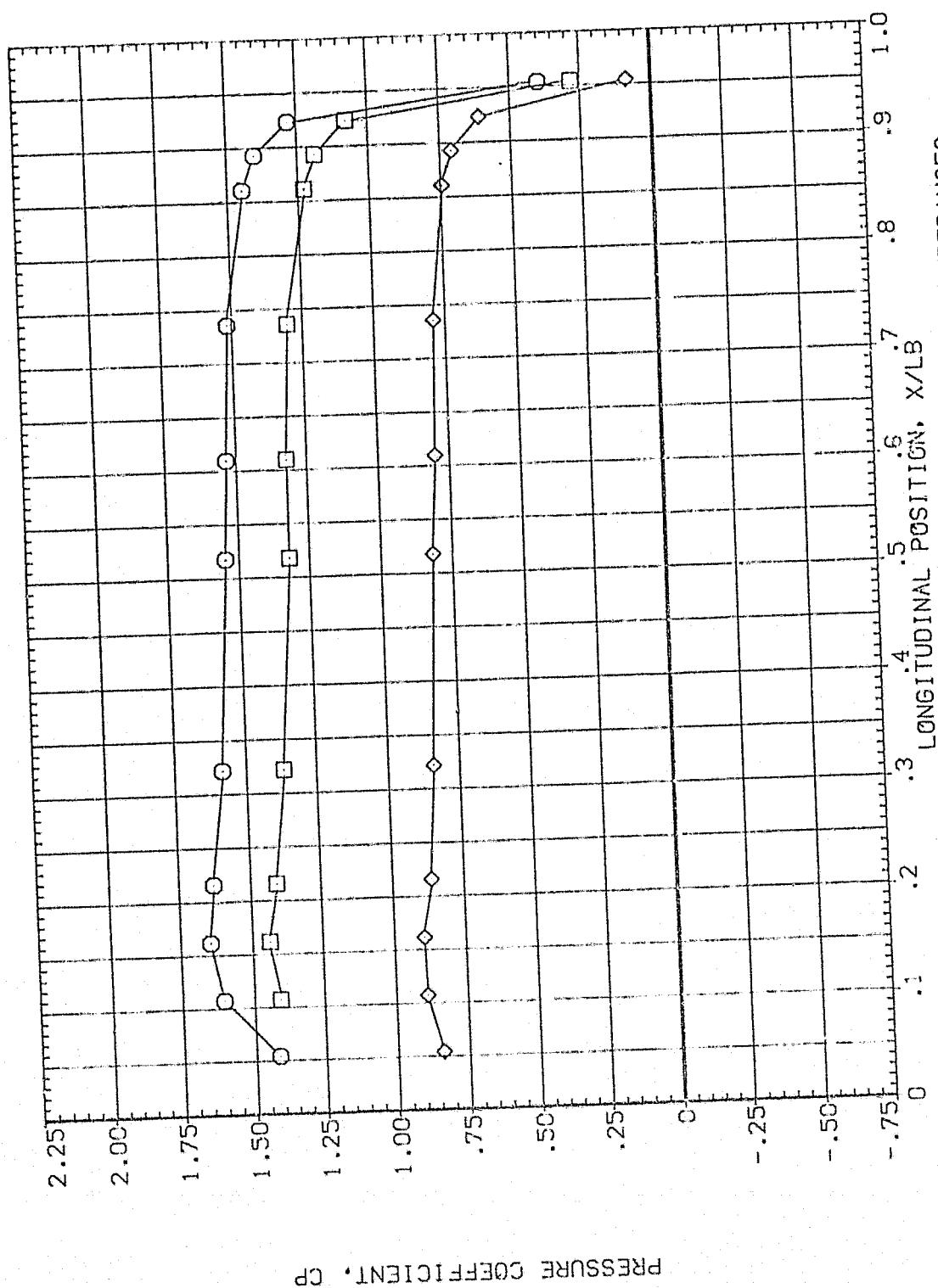


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET 80.000
 PHI .000

SYMBOL THETA ALPHA MACH
 247.500 74.850 1.960
 272.000
 292.500

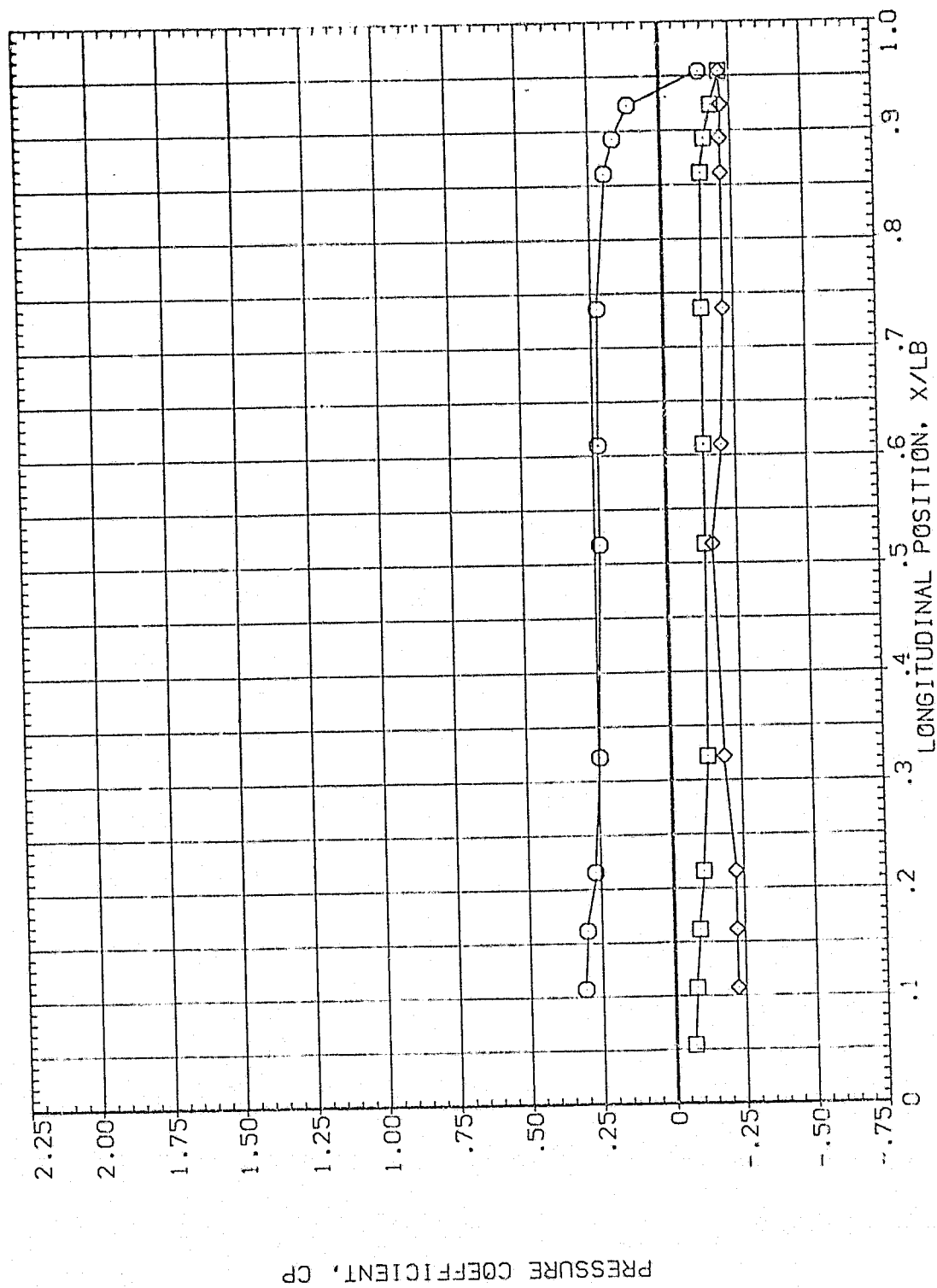


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
 ○
 □
 ◇

THETA
 315.000
 326.000
 346.000

ALPHA
 74.860

MACH
 1.960

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 OFFSET
 PHI

80.000
 .000

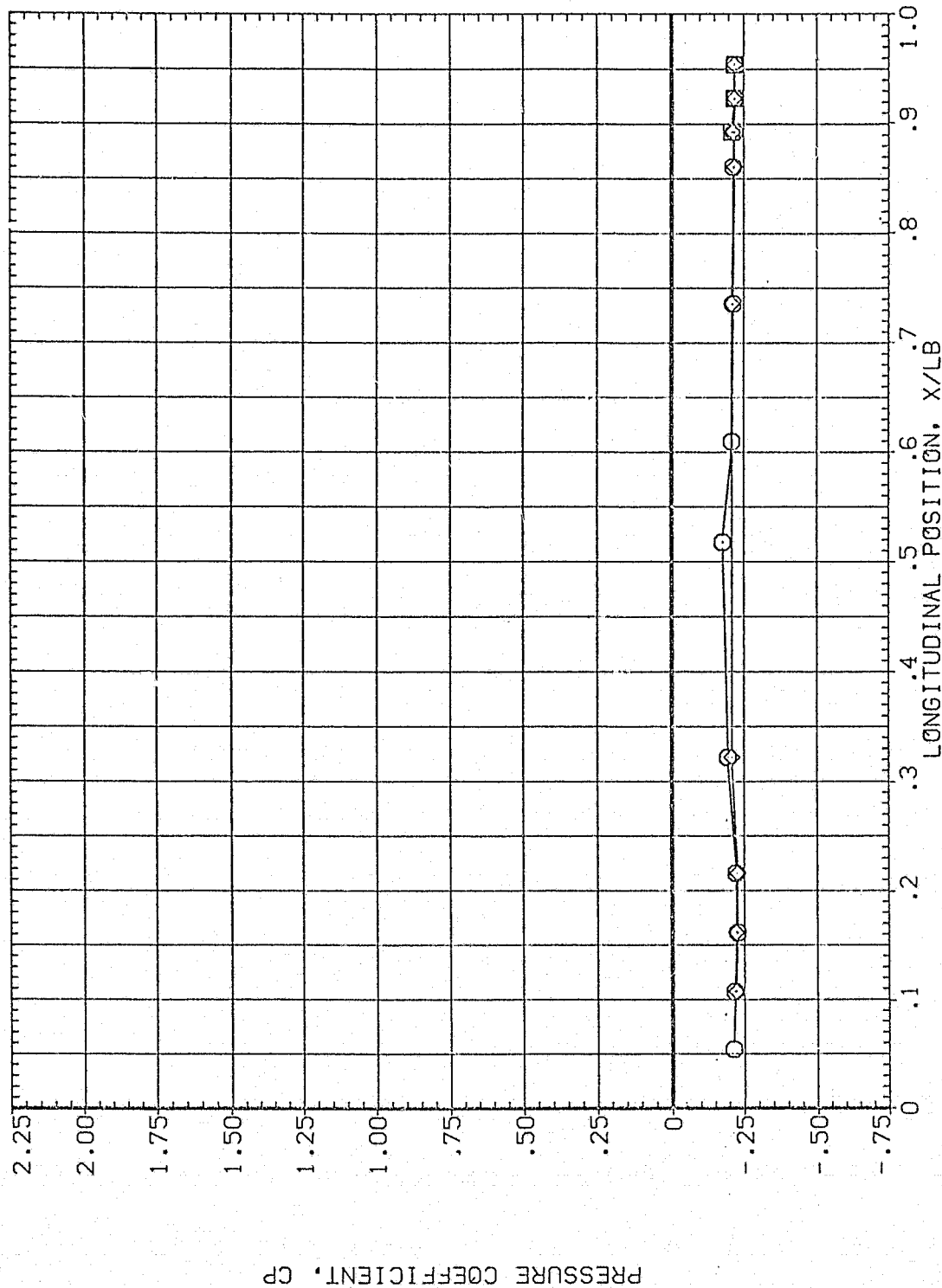


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL

THETA
.000
14.000
24.000

ALPHA
77.860
MACH
1.960

PARAMETRIC VALUES

BETA
MOUNT

.000
2.000
PHI

80.000
.000

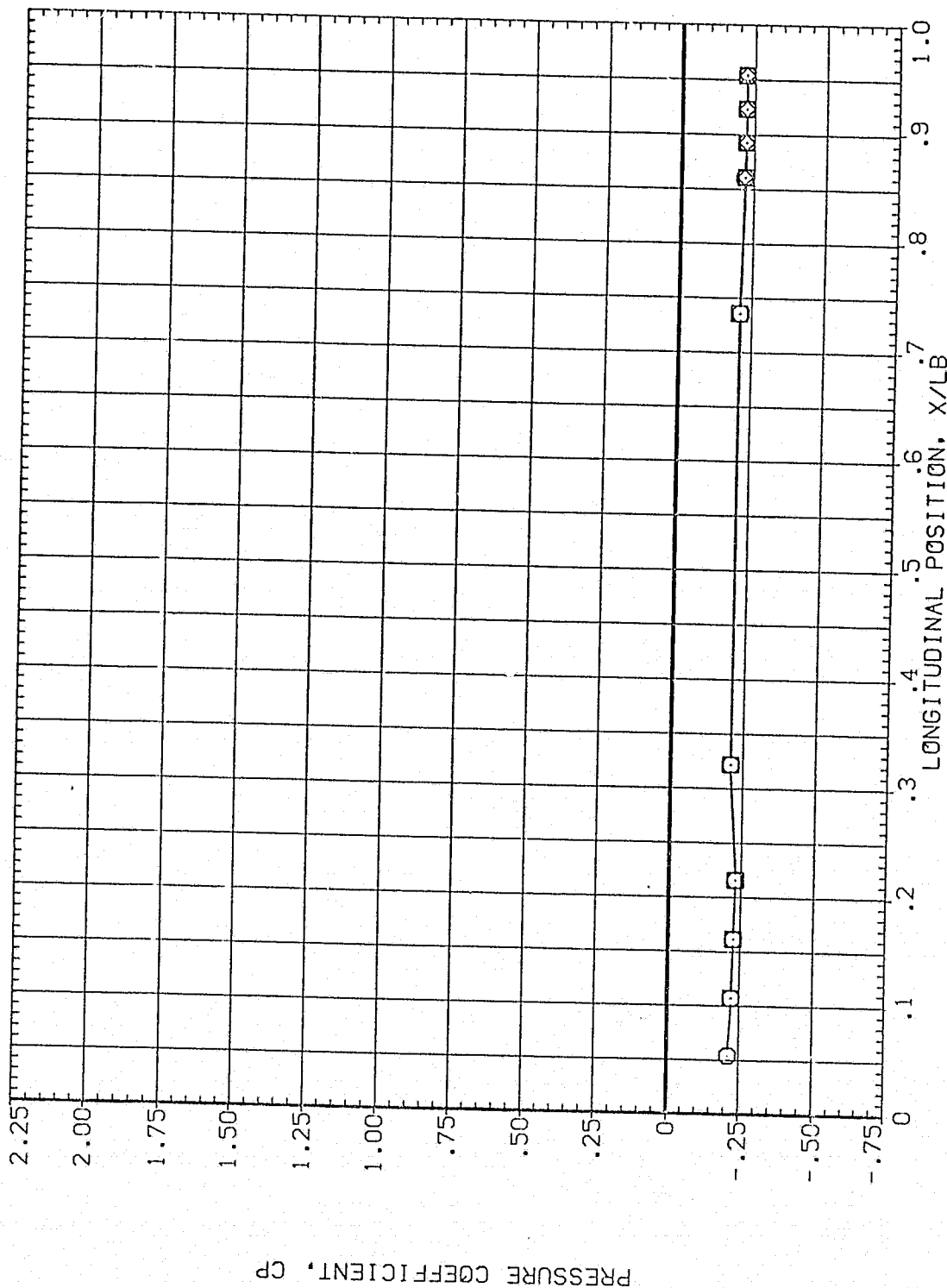


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

(P1A071)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
PHI 80.000
OFFSET .000

SYMBOL
THETA 45.000
ALPHA 77.860
MACH 1.960
45.000
67.500
90.000

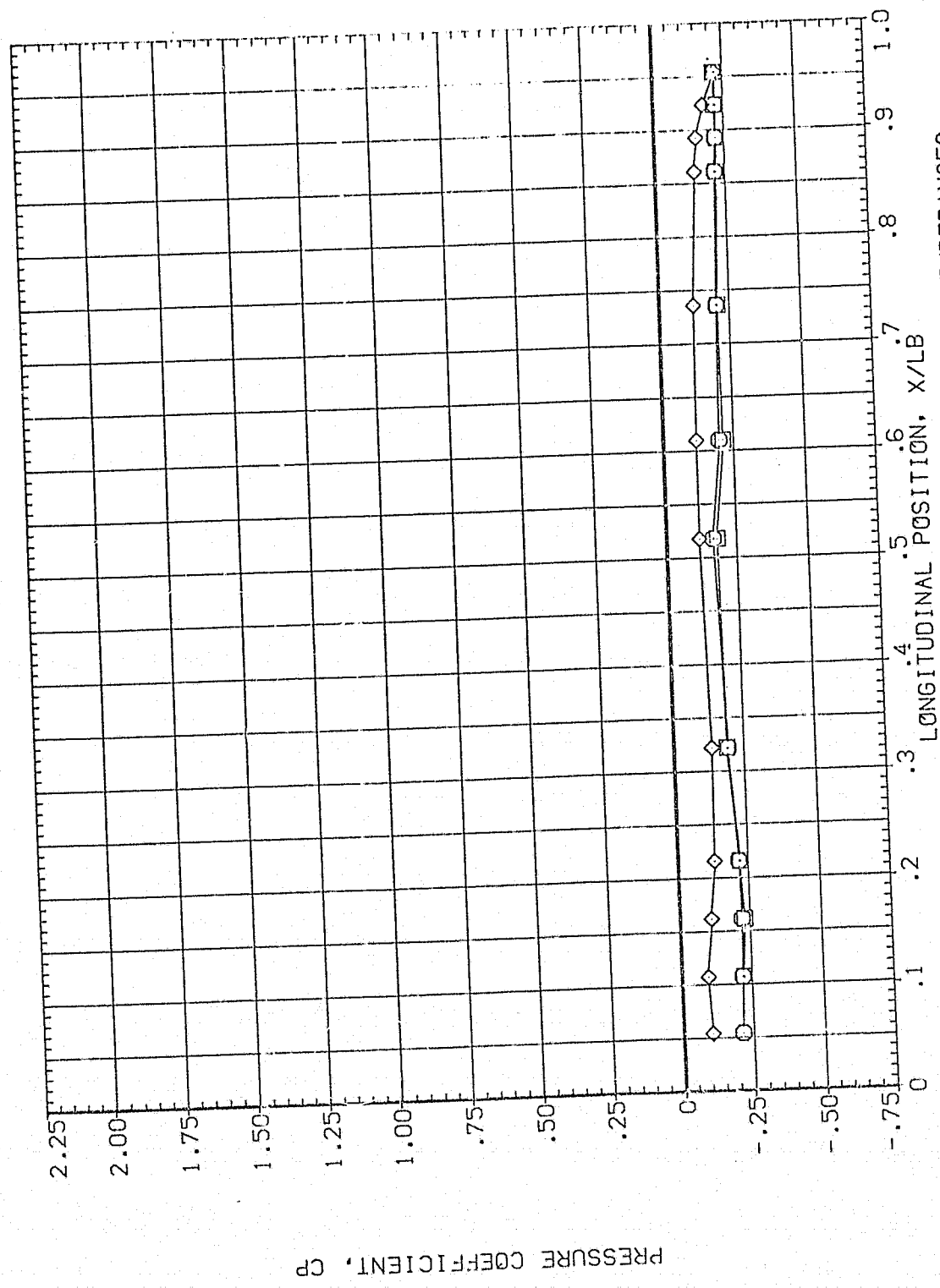


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(PIA071)

SYMBOL

THETA
112.500
135.000
157.500

ALPHA
77.860

MACH
1.960

PARAMETRIC VALUES

BETA
MOUNT

2.000

PHI

80.000
.000

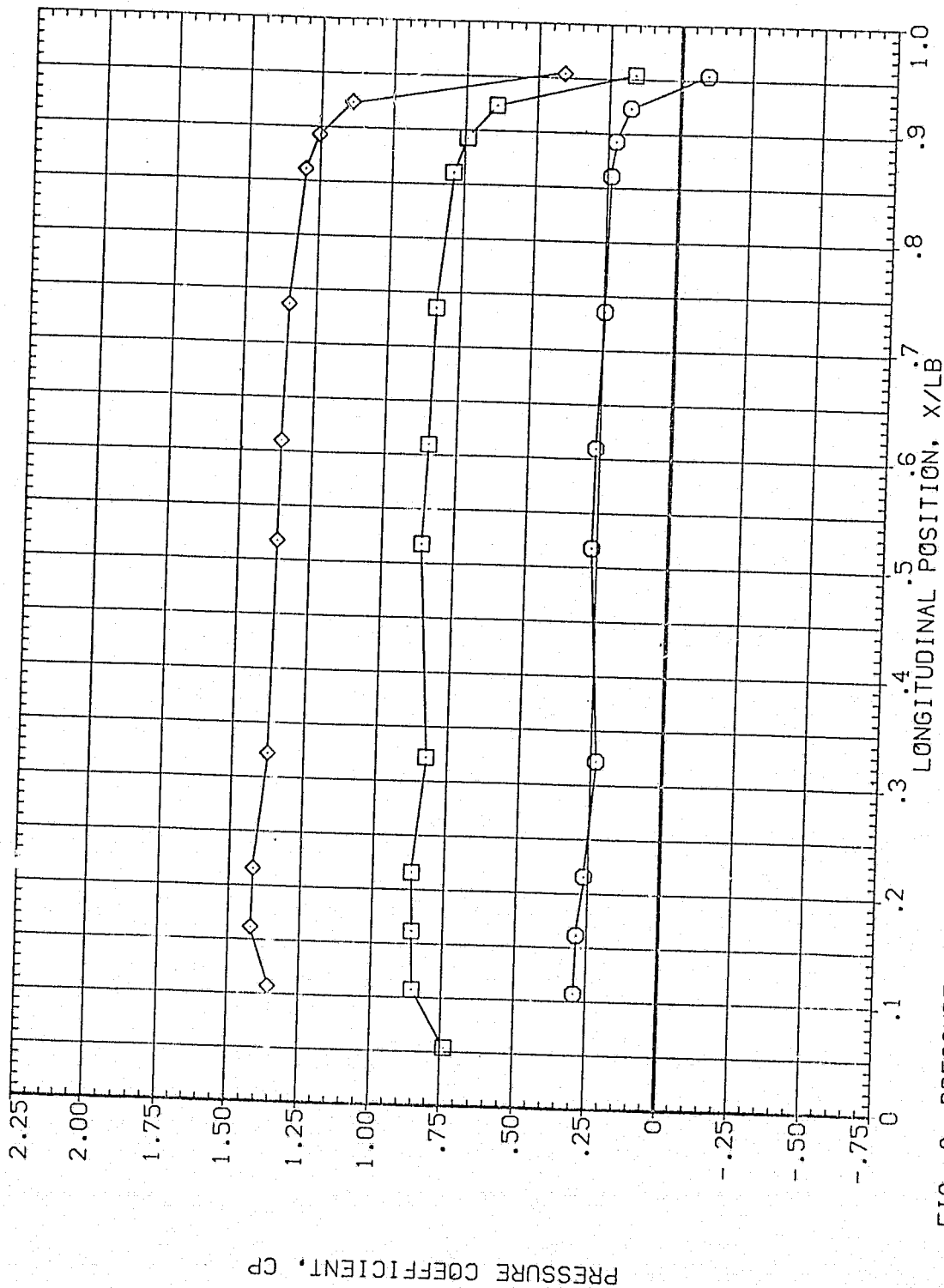


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL

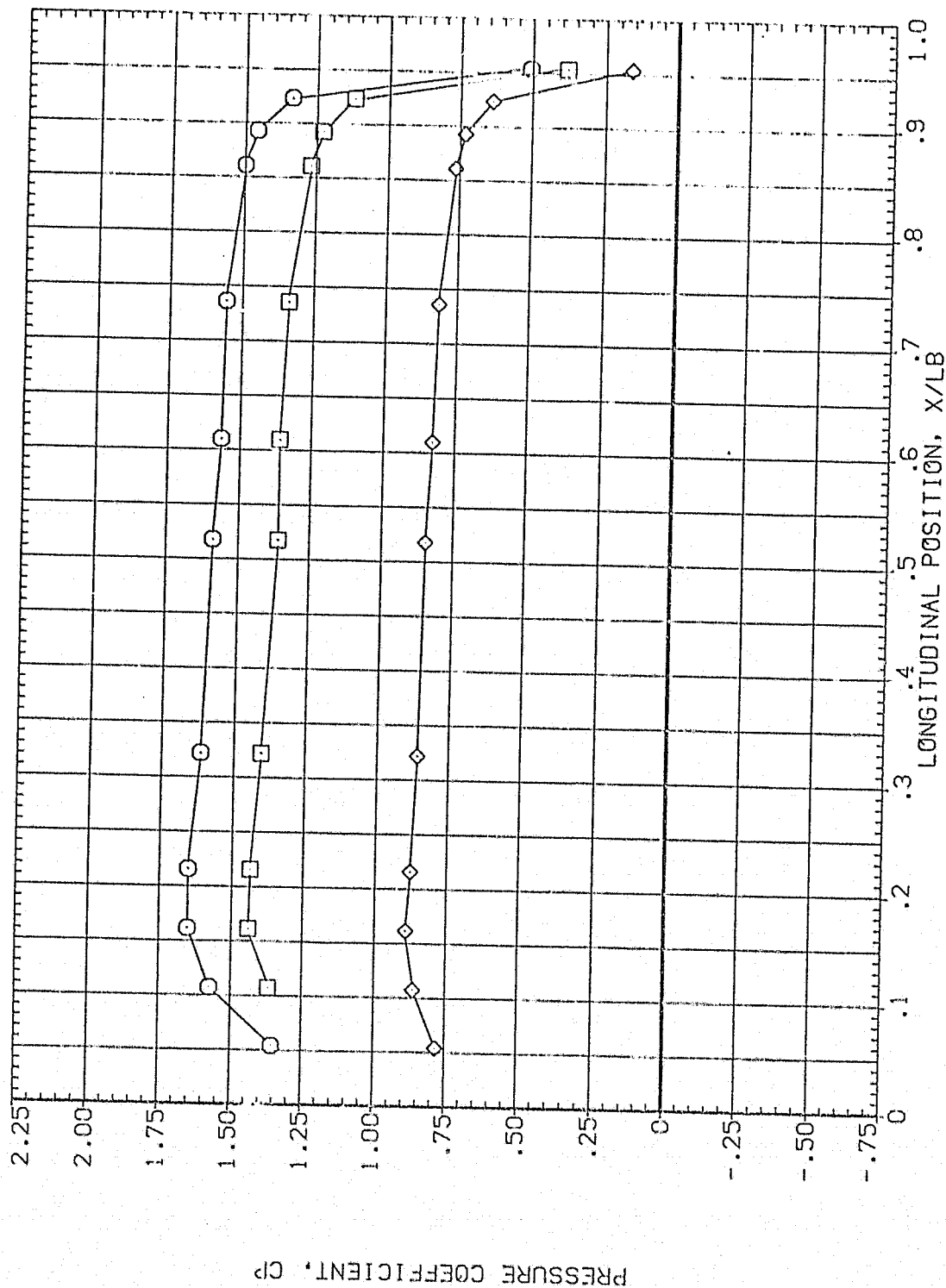
THETA
180.000
202.500
225.000

ALPHA
77.860

MACH
1.960

PARAMETRIC VALUES
.000 OFFSET
2.000 PHI

BETA
MOUNT
80.000
.000



MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	77.860	1.960	MCOUNT	.000
□	270.000				OFFSET
◇	292.500				PH: .000

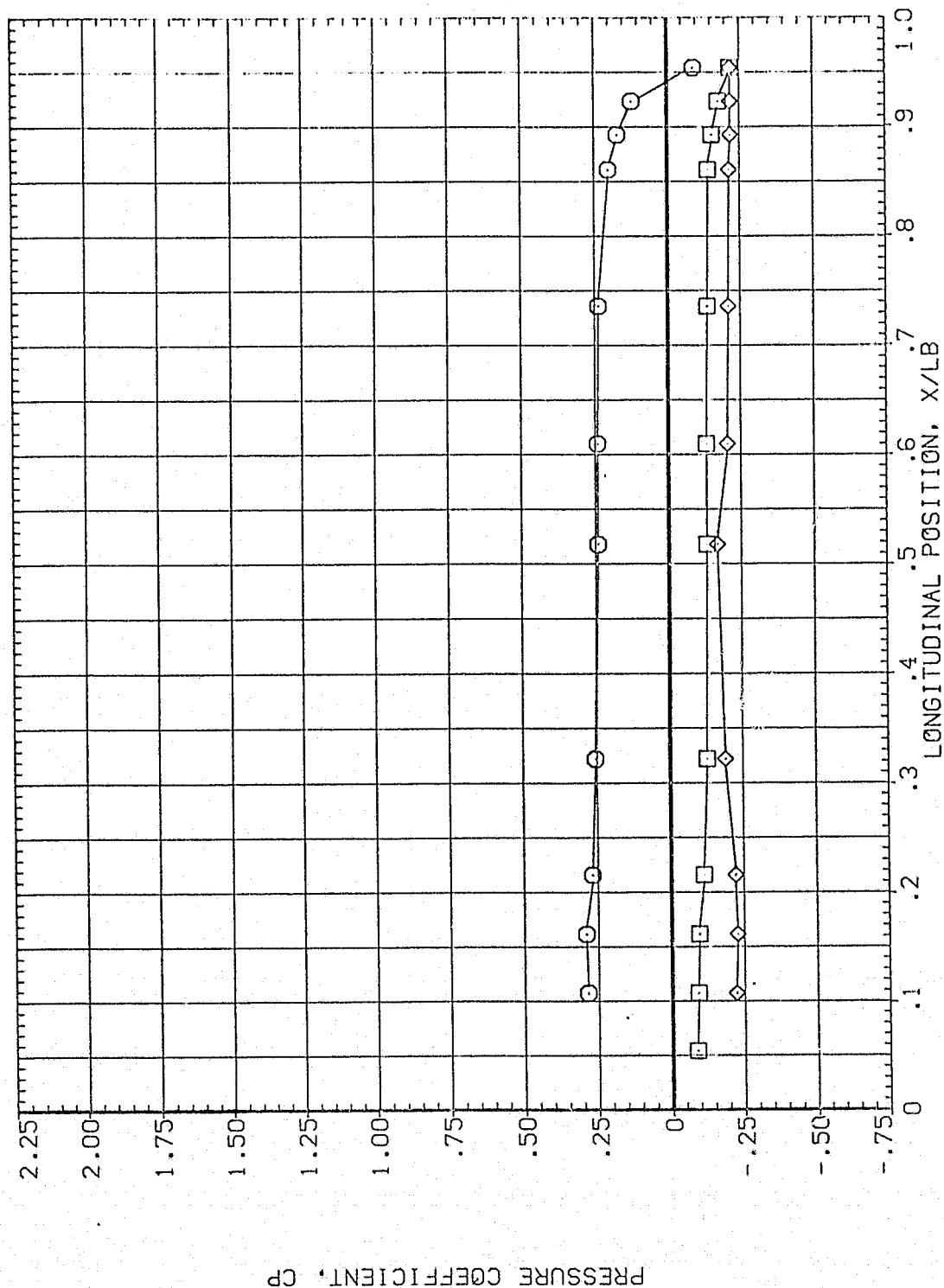


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	80.000
○	315.000	77.860	1.960	MOUNT	PHI	.000
□	325.000					
◇	345.000					

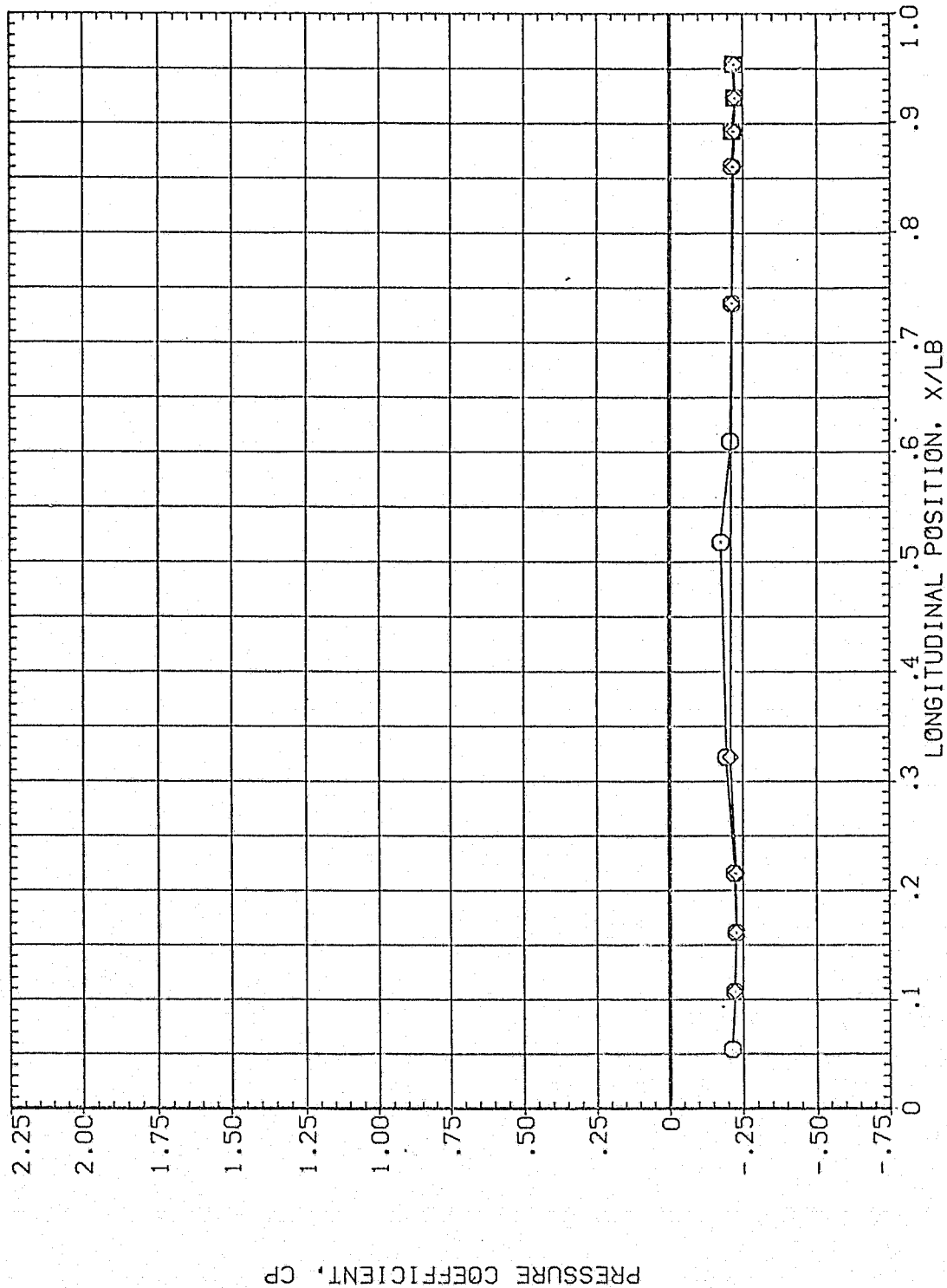


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.000	79.930	1.970	MOUNT	.000	90.000
□	14.000				2.000	
◇	24.000					.000

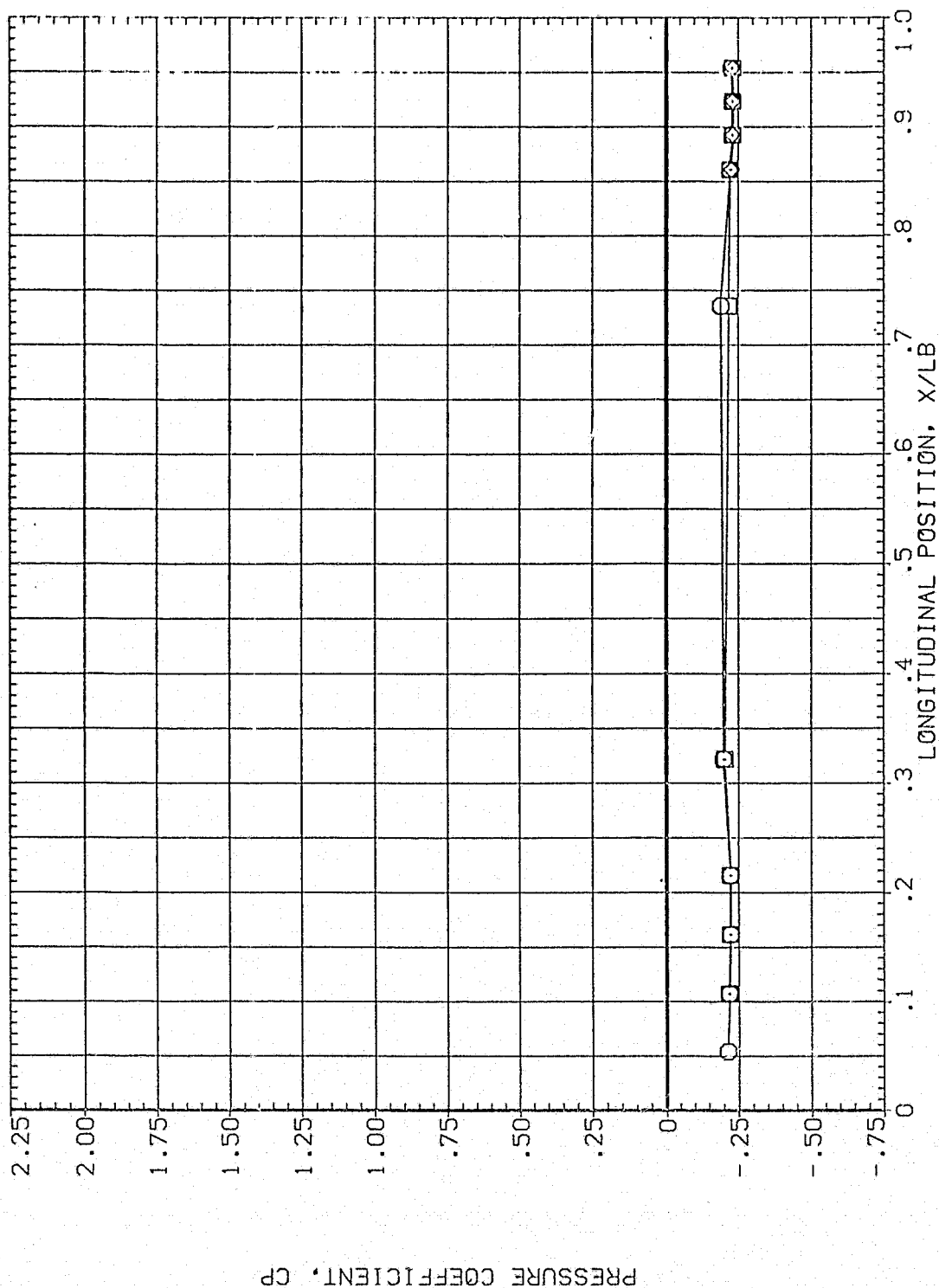


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL THETA ALPHA MACH
 O 45.000 79.930 1.970
 □ 67.500
 ◇ 90.000

PARAMETRIC VALUES
 .000 OFFSET
 2.000 PHI
 90.000
 .030

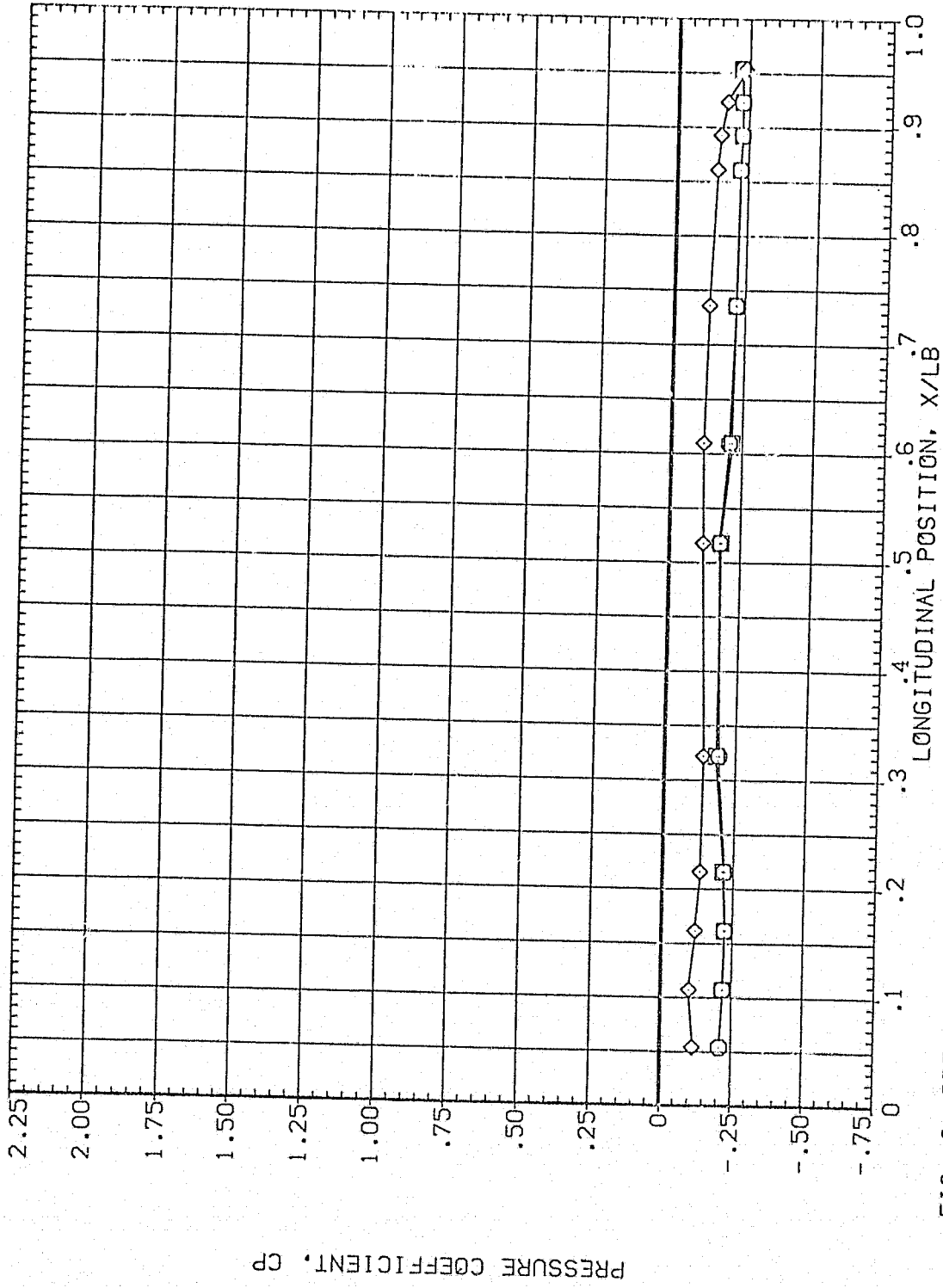


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSEC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES		
					.000	OFFSET	90.000
◇	112.500	79.930	1.970	MOUNT	2.000	PHI	.000
□	135.000						
○	157.500						

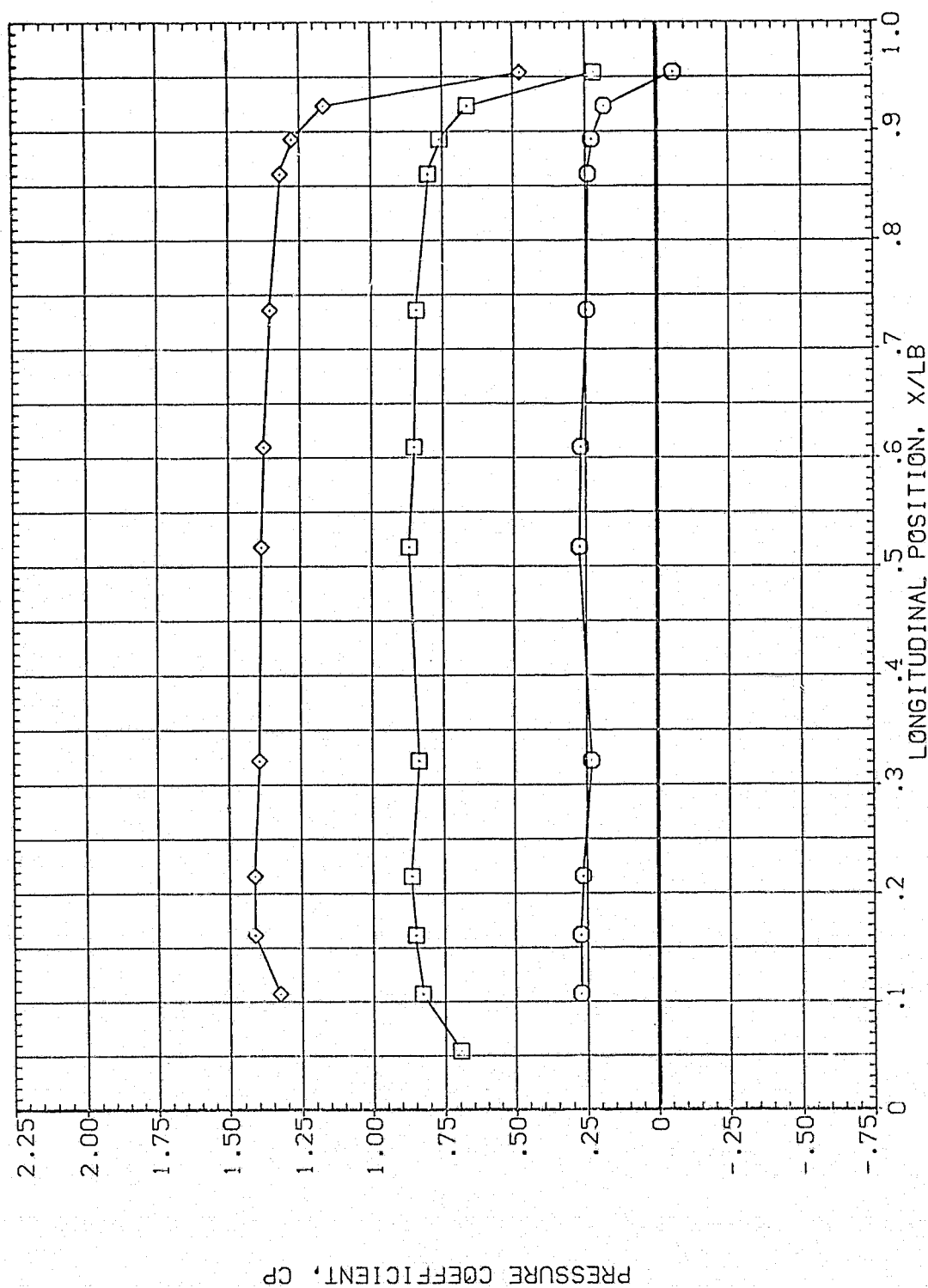


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

(P1A072)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL
○
□
◇

THETA
180.000
202.500
225.000

ALPHA
79.930

MACH
1.970

BETA
MOUNT

PARAMETRIC VALUES
90.000
OFFSET
2.000
PHI
.000

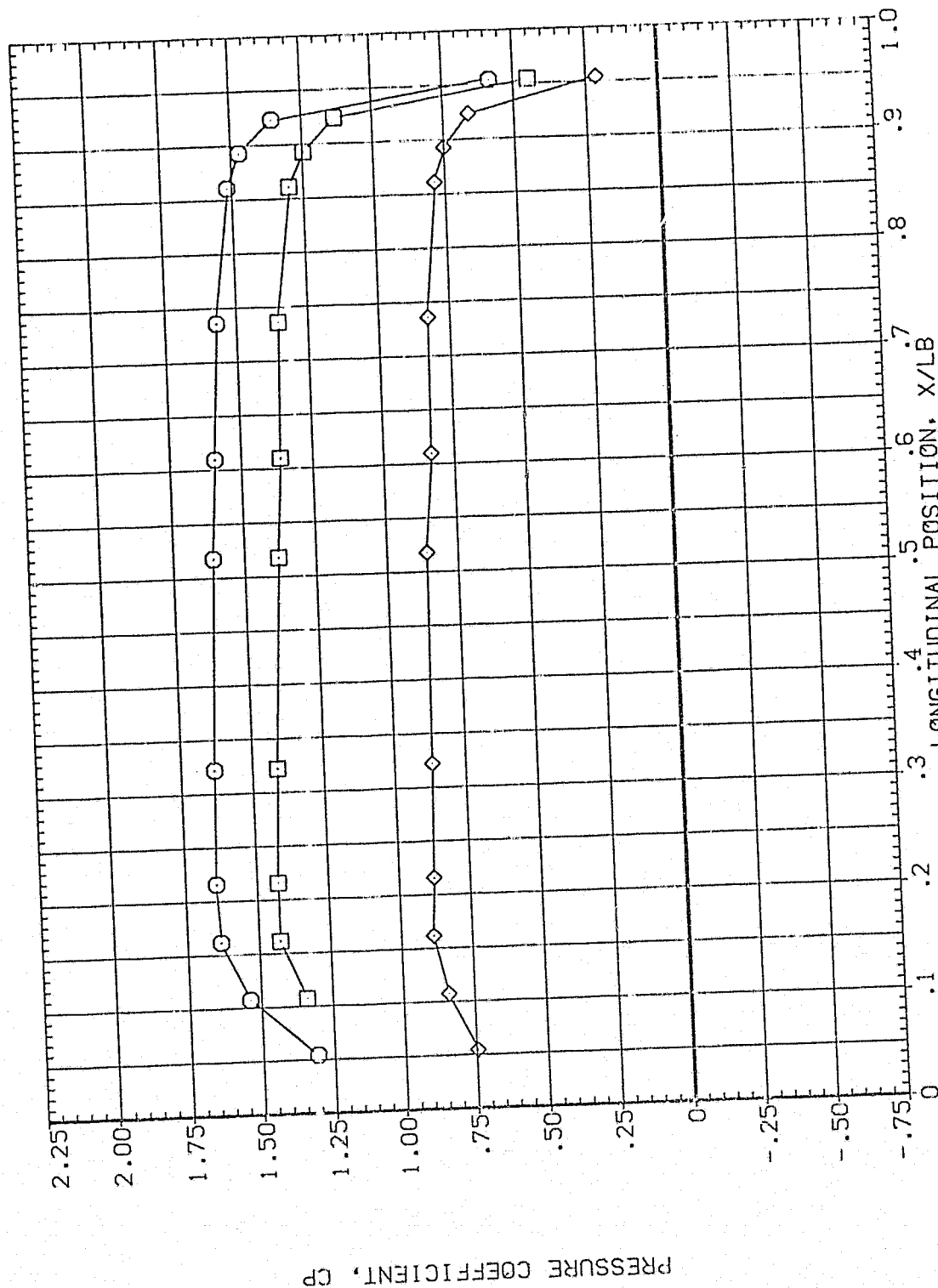


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI .000

THETA ALPHA MACH
 247.500 79.930 1.970
 270.000
 292.500

SYMBOL
 ○
 □
 ◇

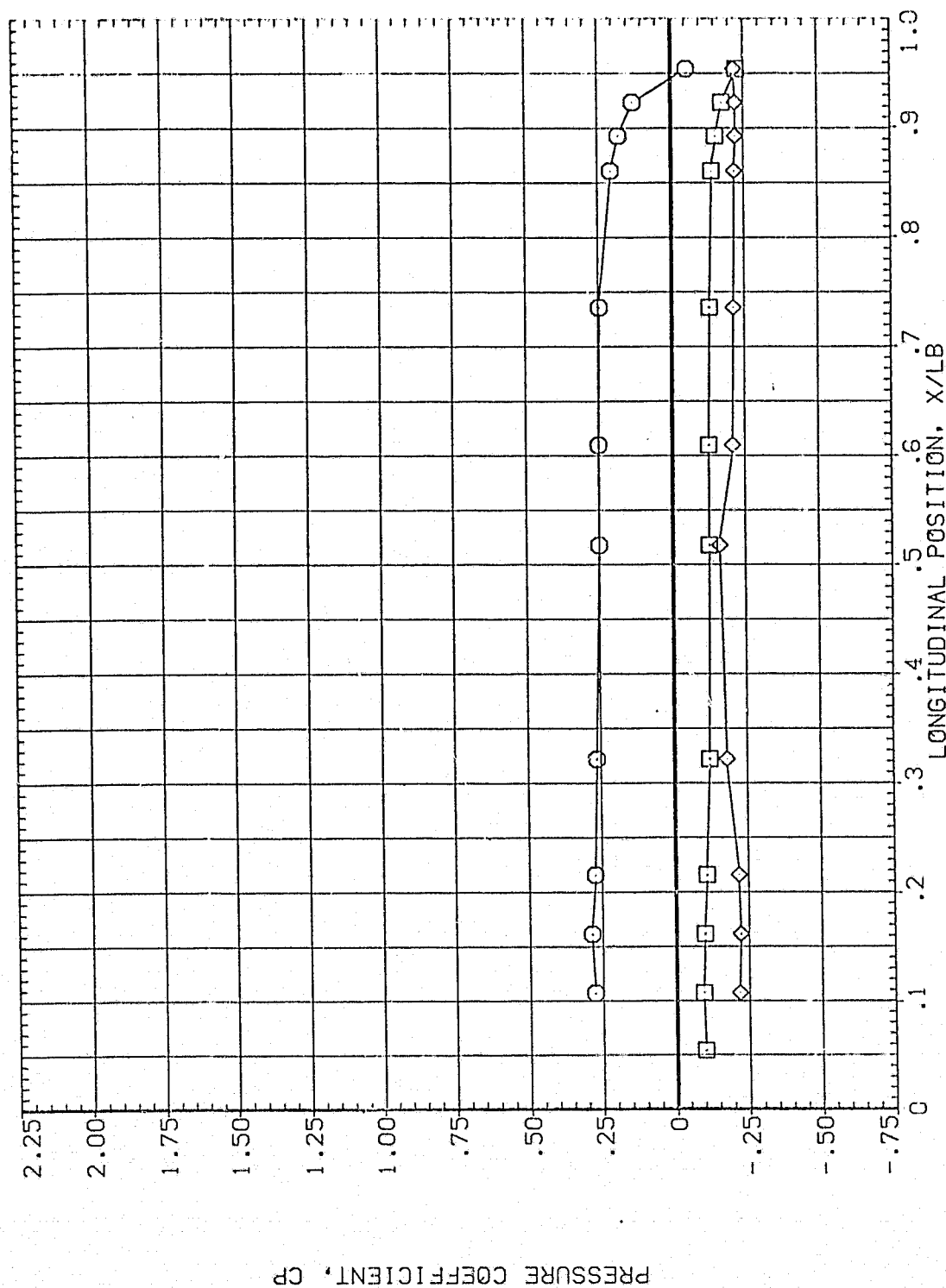


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	315.000	79.930	1.370	MOUNT	.000	90.000
□	326.000				2.000	.000
◇	346.000					

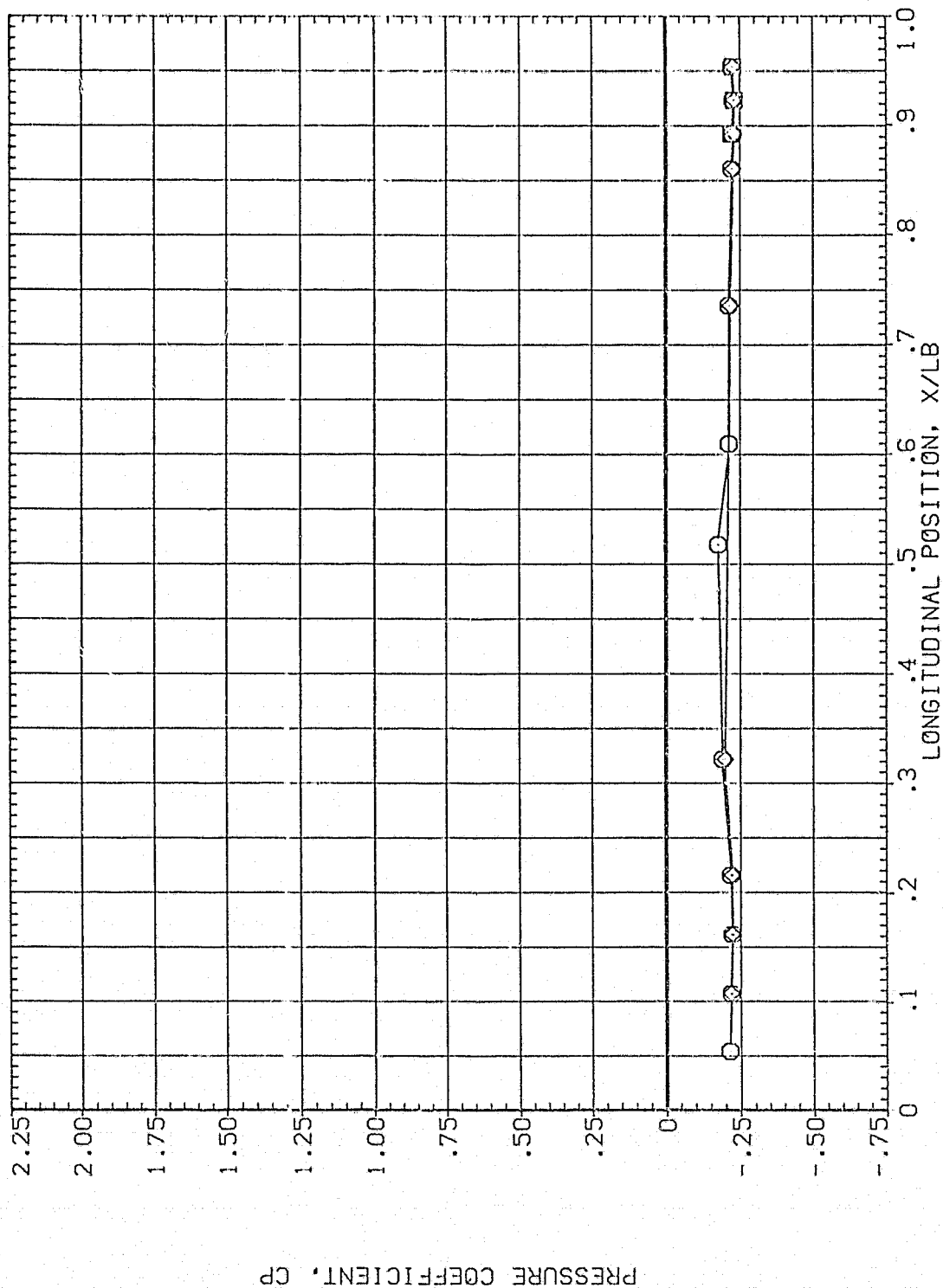


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL
 ○ □ ◇

THETA .000
 ALPHA 81.830
 MACH 1.970

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

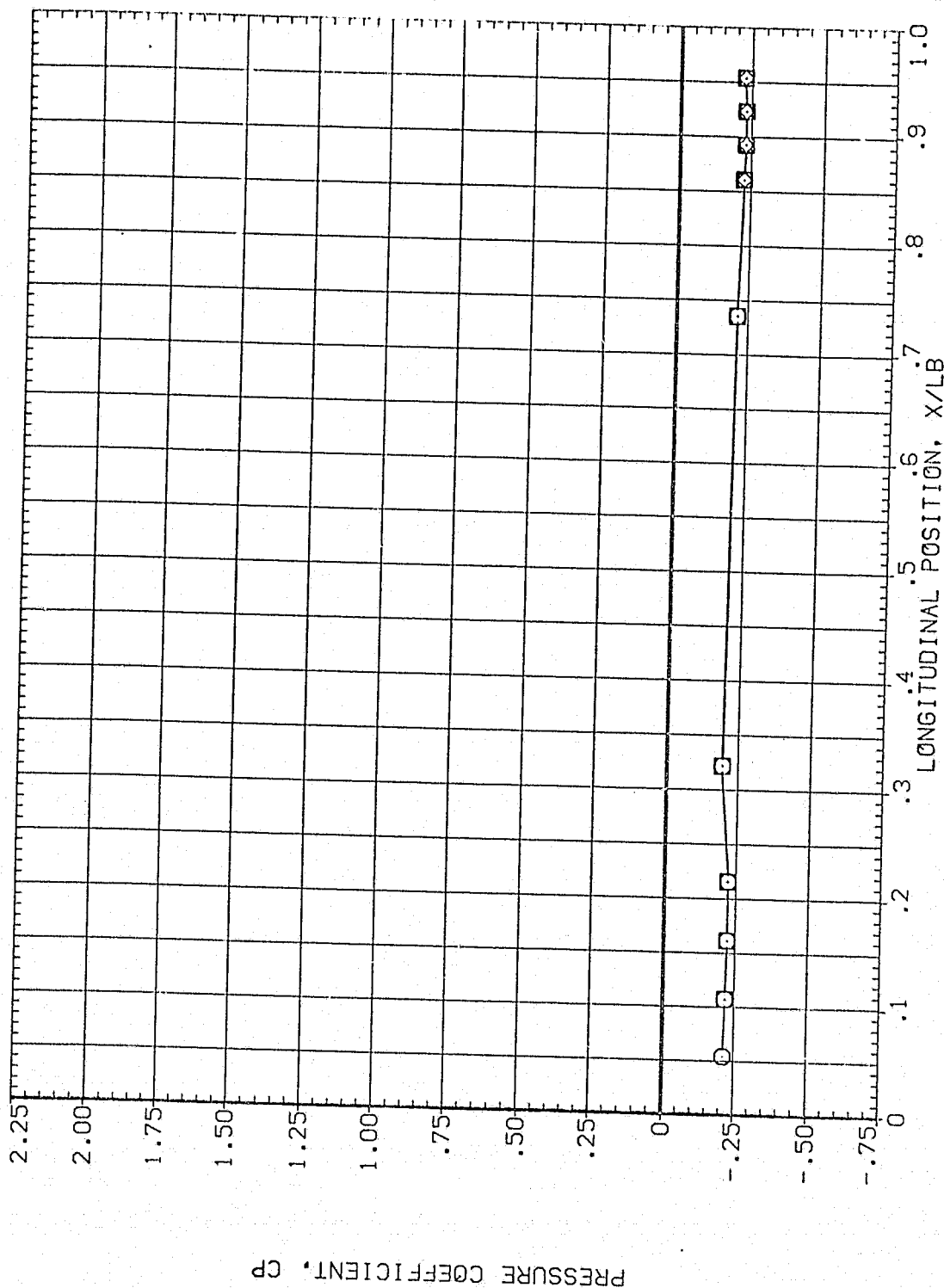


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	PARAMETRIC VALUES	
	BETA	OFFSET
○	2.000	.000
□	2.000	.000
◇	2.000	.000

THETA	ALPHA	MACH
45.000	81.830	1.970
67.500		
90.000		

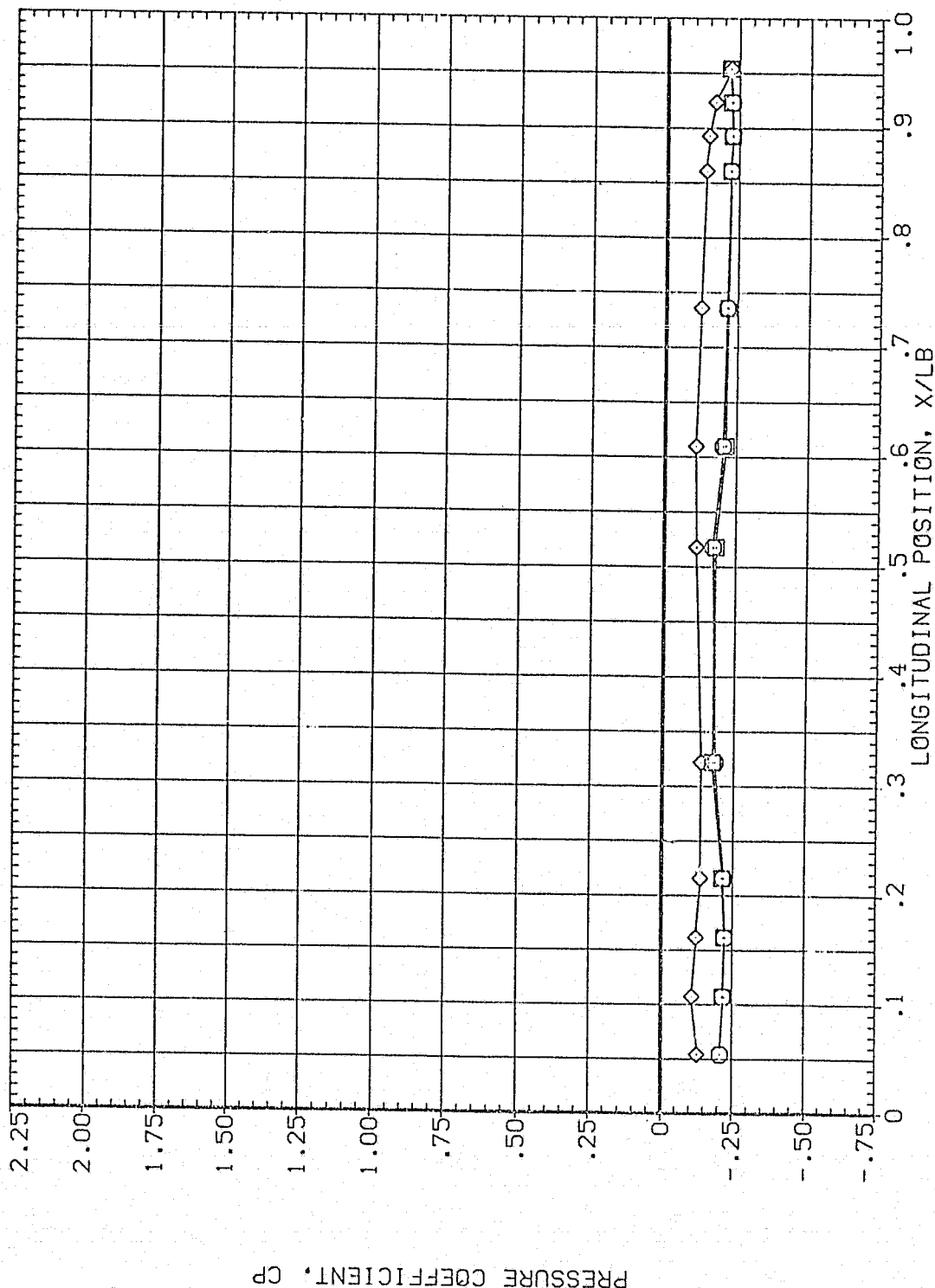


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	112.500	81.830	1.970	MOUNT	.000
□	135.000				2.000
◇	157.500				.000

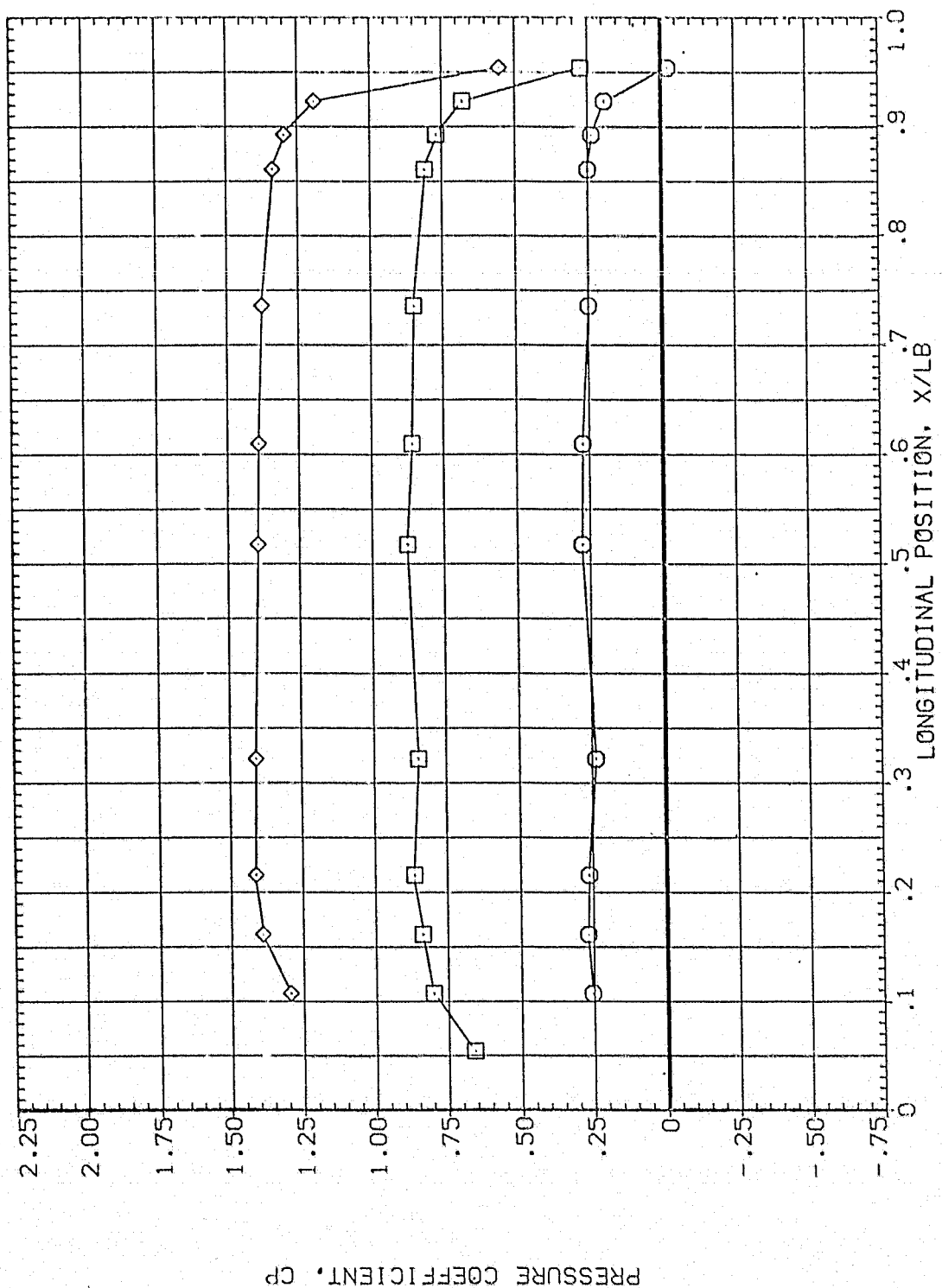


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	81.839	1.970	MCOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				90.000

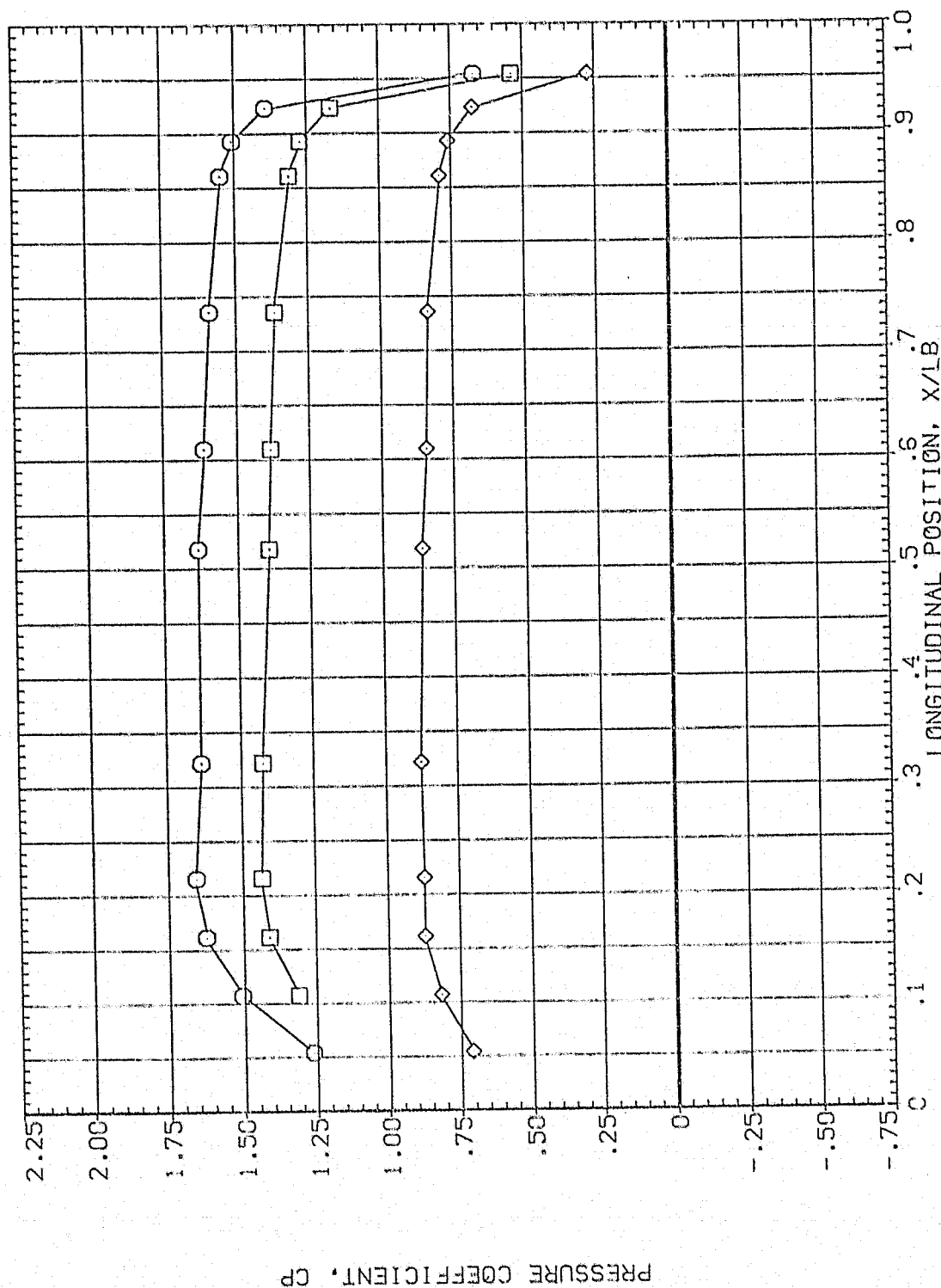


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 .000 OFFSET
 2.000 PHI
 90.000
 .000

BETA
 MOUNT

ALPHA
 81.830
 MACH
 1.970

SYMBOL
 247.500
 270.000
 292.500

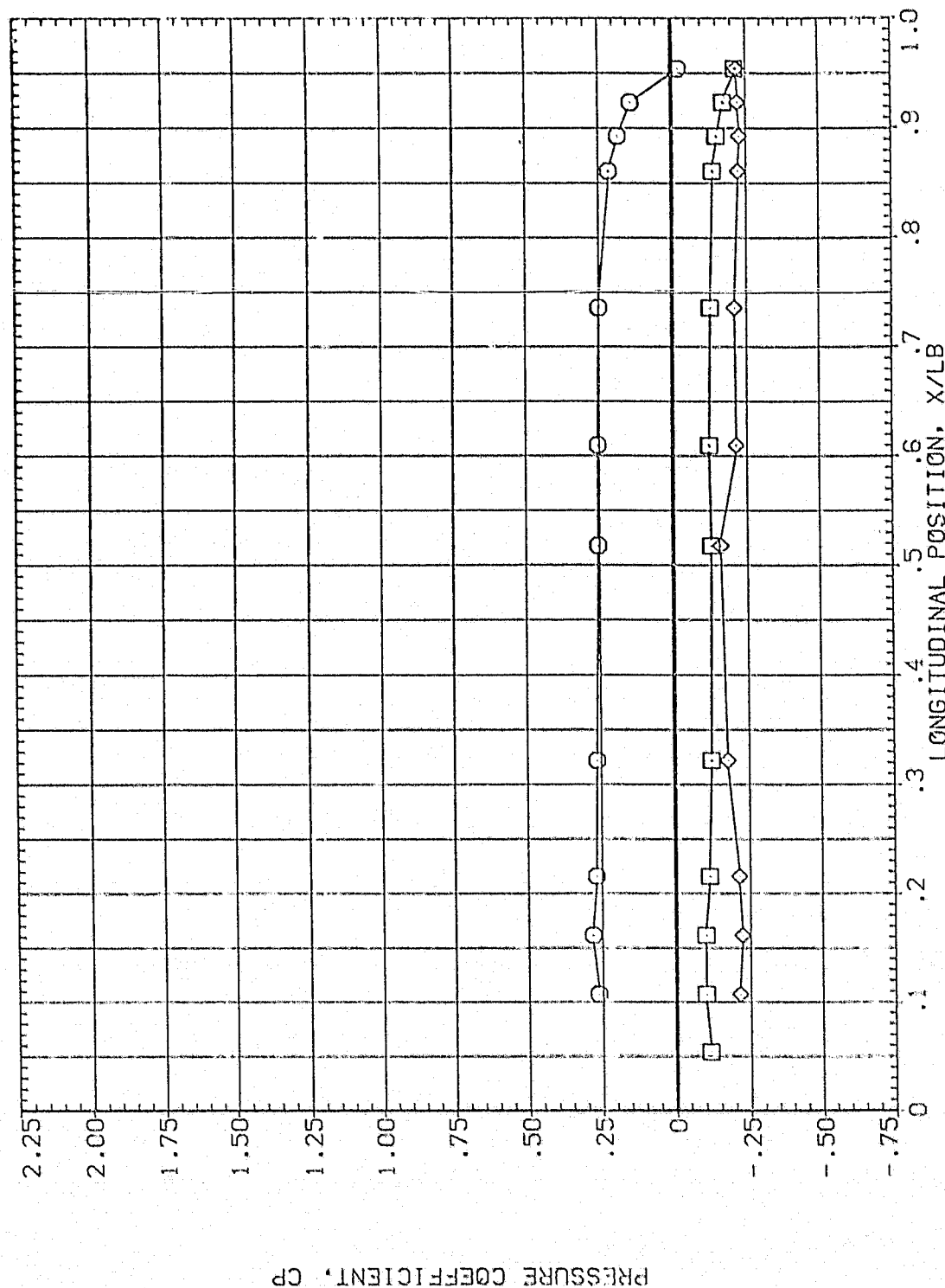


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
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NSFC 598 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL THETA ALPHA MACH
 O 315.000 81.830 1.970
 □ 326.000
 ◇ 346.000

PARAMETRIC VALUES
 BETA .033 OFFSET 90.000
 PCOUNT 2.000 PHI .000

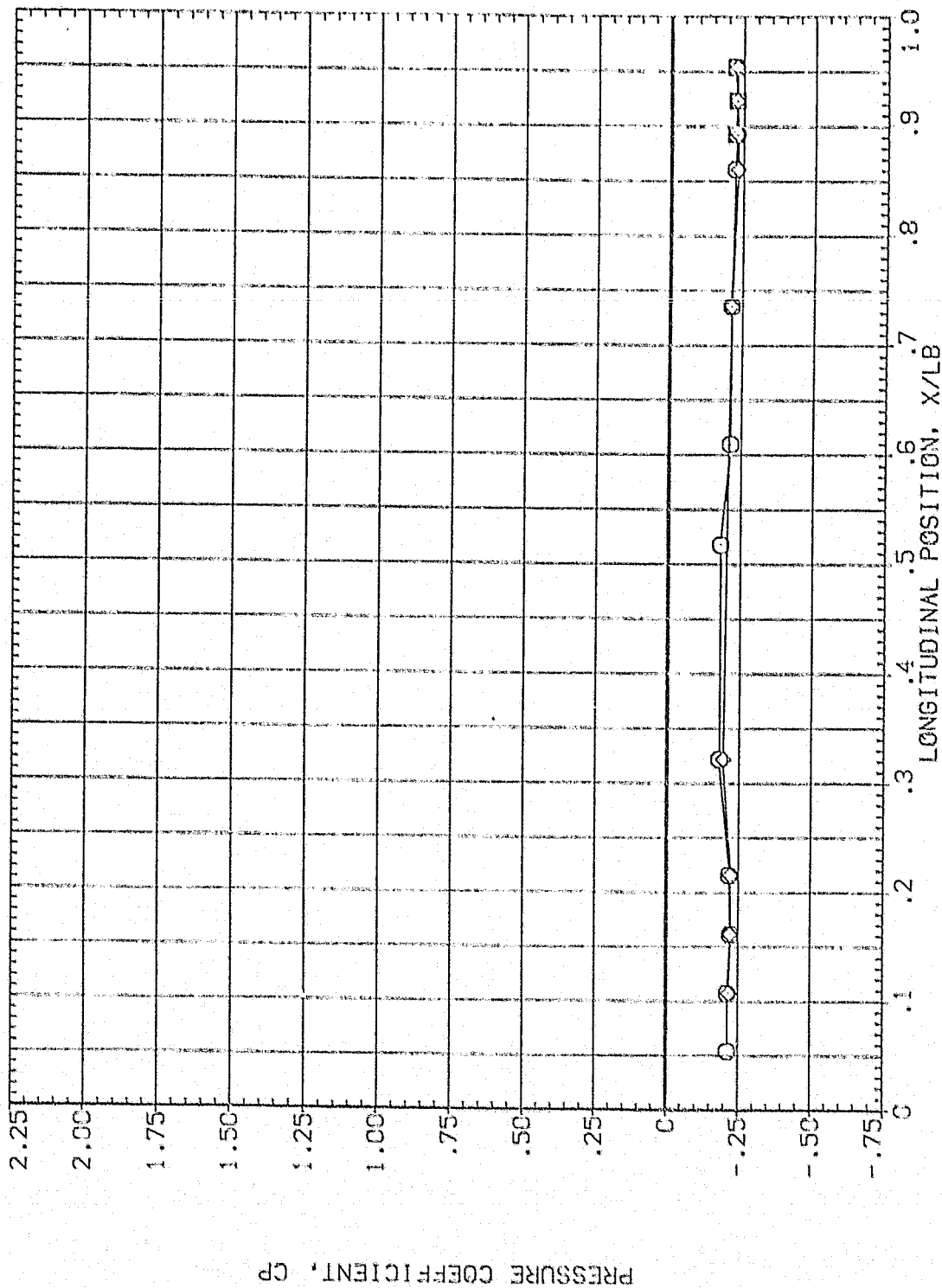


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA074)

SYMBOL
 ○
 □
 ◇

THETA
 .000
 14.000
 24.000

ALPHA
 84.830

MACH
 1.970

BETA
 MCUNT

PARAMETRIC VALUES
 .000
 2.000
 .000
 .000
 PHI

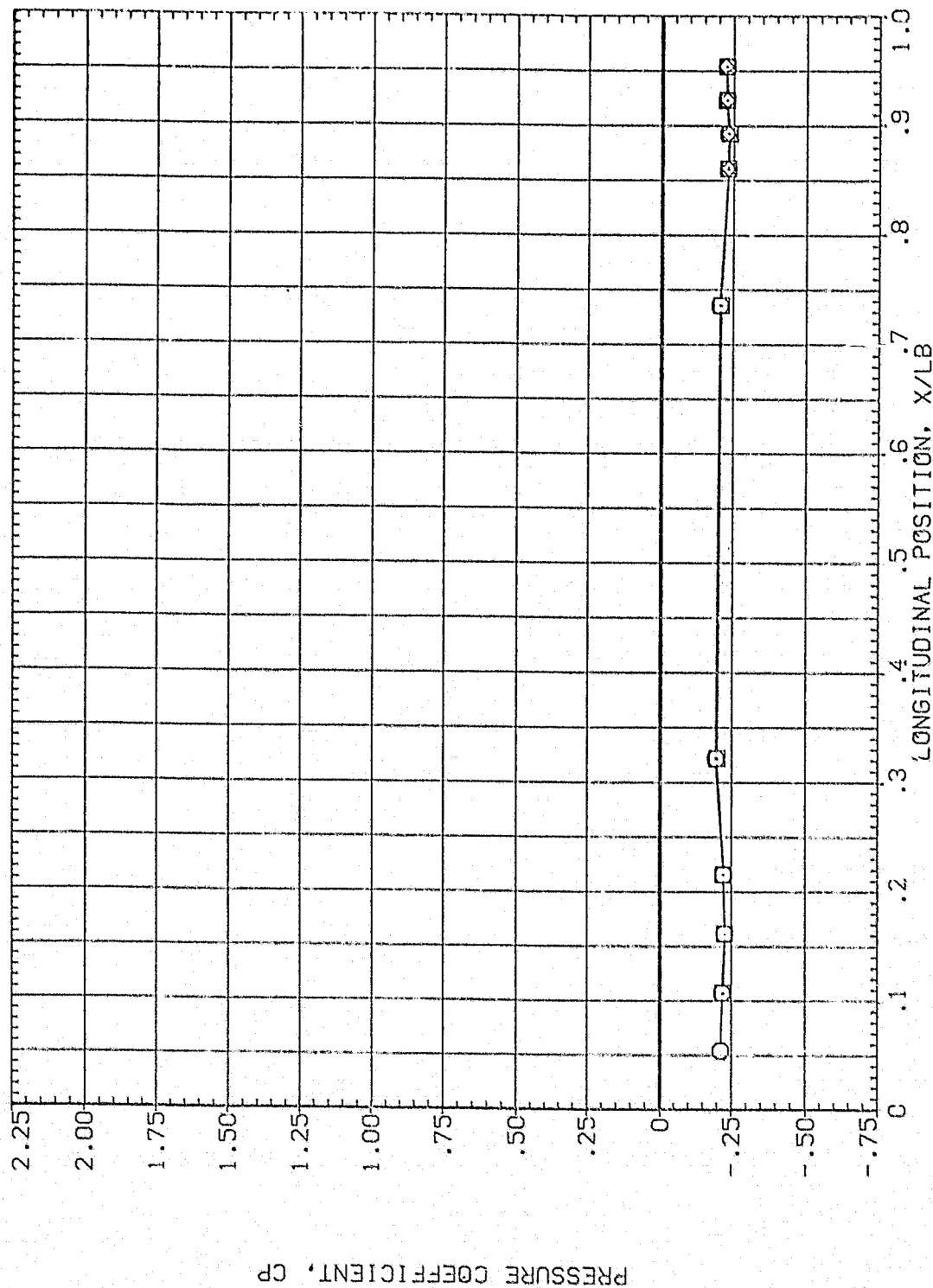


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL THETA ALPHA MACH
 O 45.000 84.830 1.970
 □ 67.500
 ◇ 90.000

PARAMETRIC VALUES
 BETA .000 OFFSET 90.000
 MOUNT 2.000 PHI .000

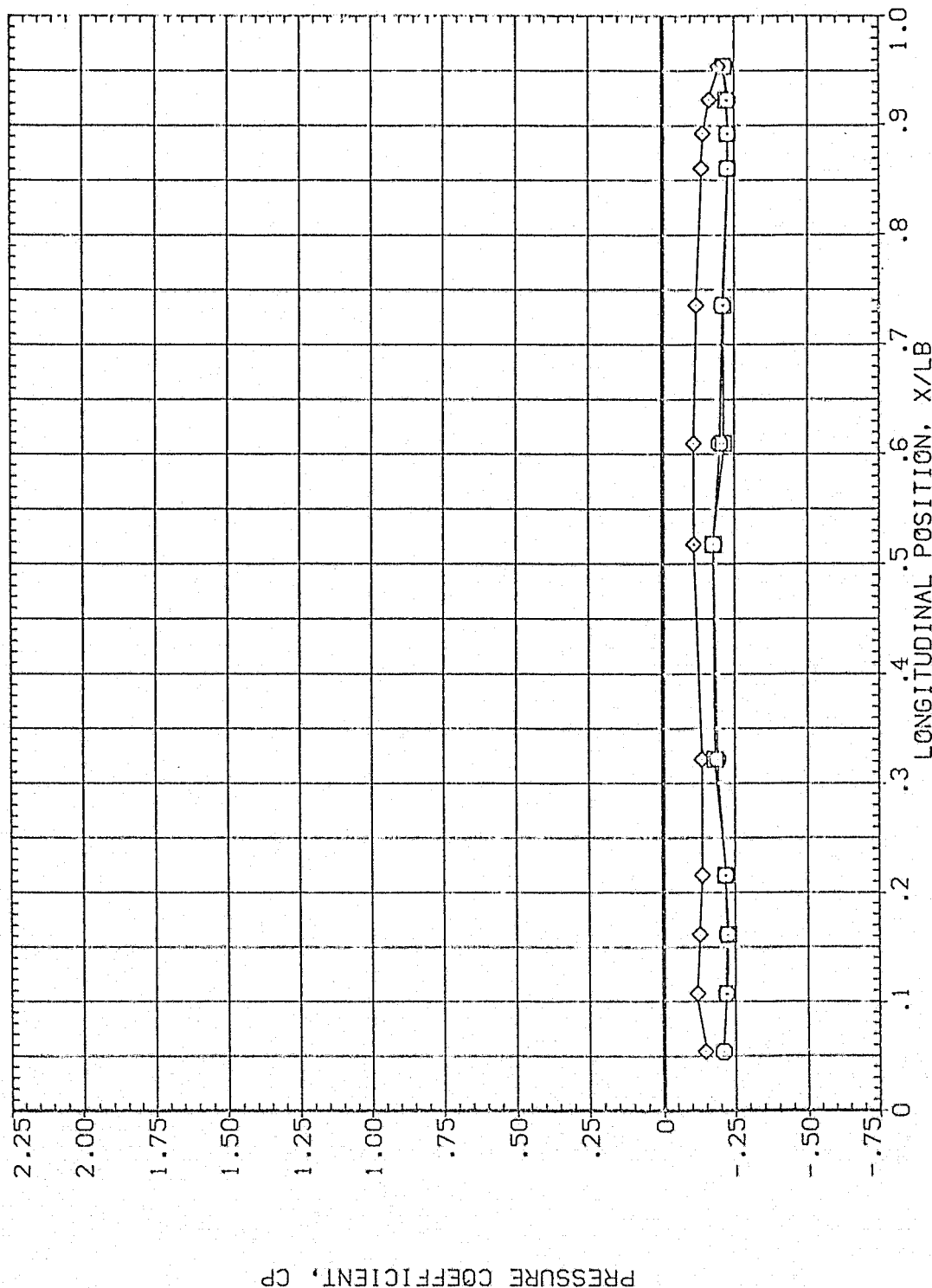


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	84.830	1.970	2.000	.000	.000
□	135.000					
◇	157.500					

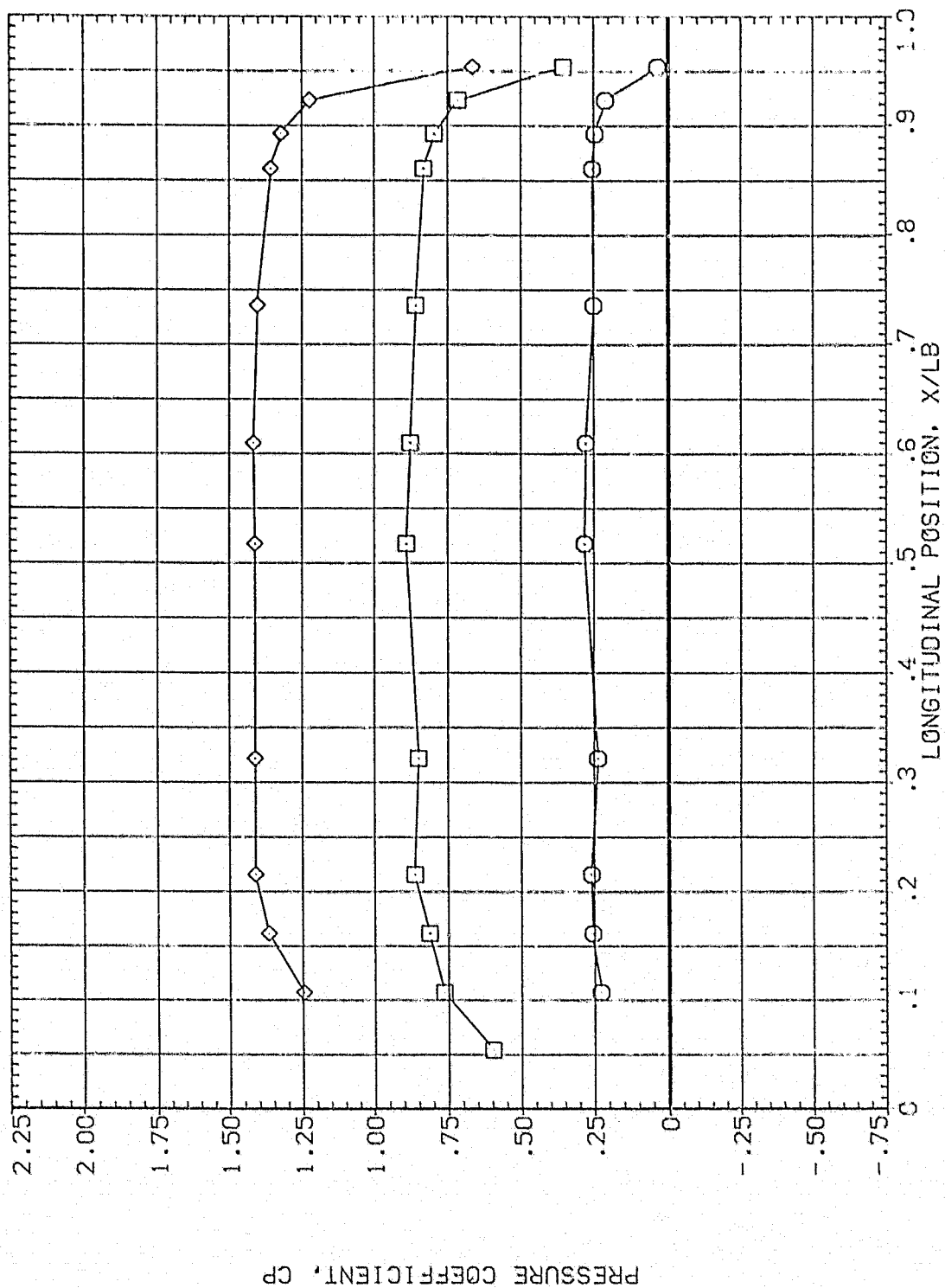


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	180.000	84.830	1.970	MOUNT	.000	.000
□	202.500				2.000	
◇	225.000					

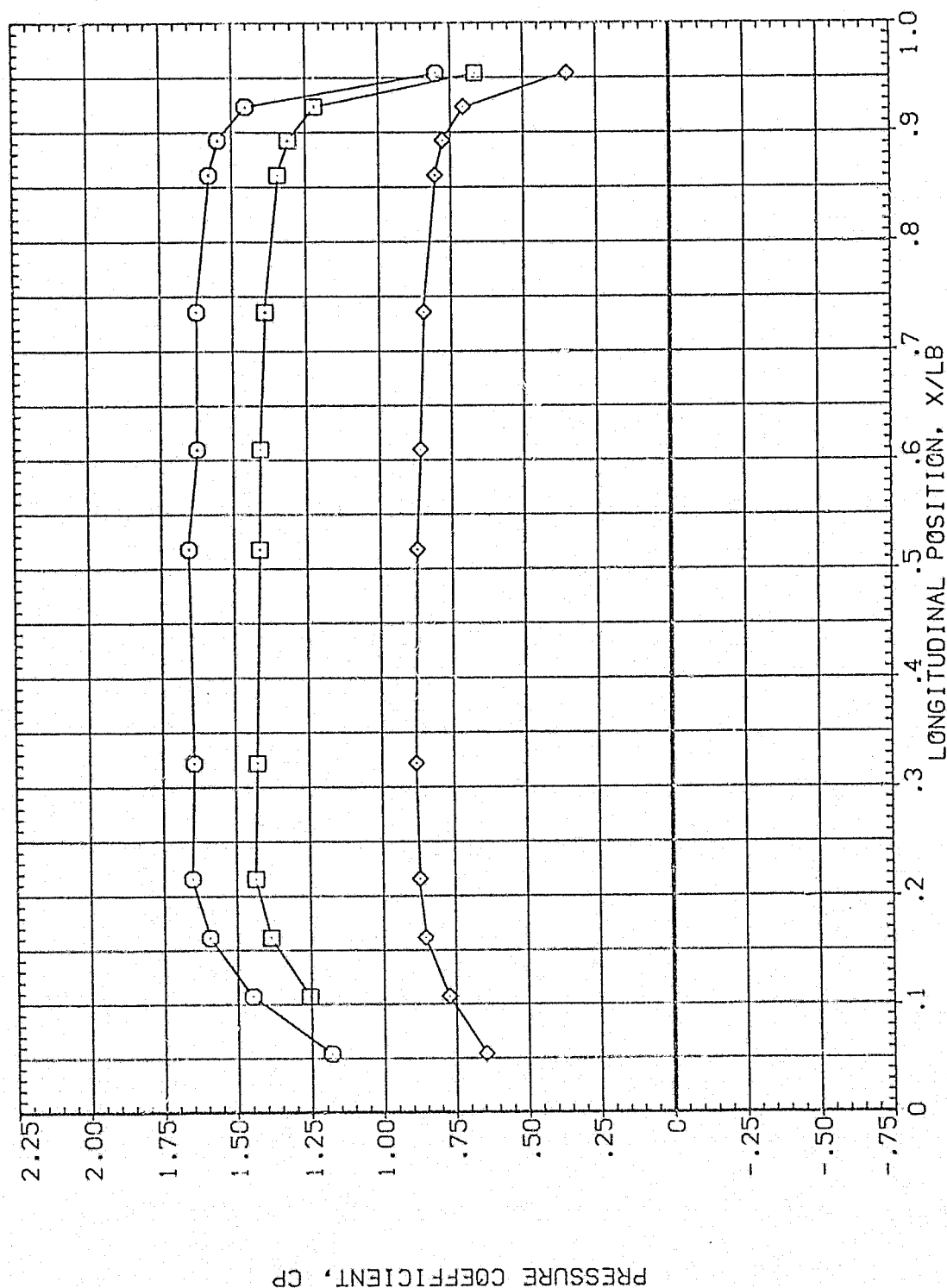


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	84.830	1.970	2.000	.000	90.000
□	270.000			2.000		.000
◇	292.500					

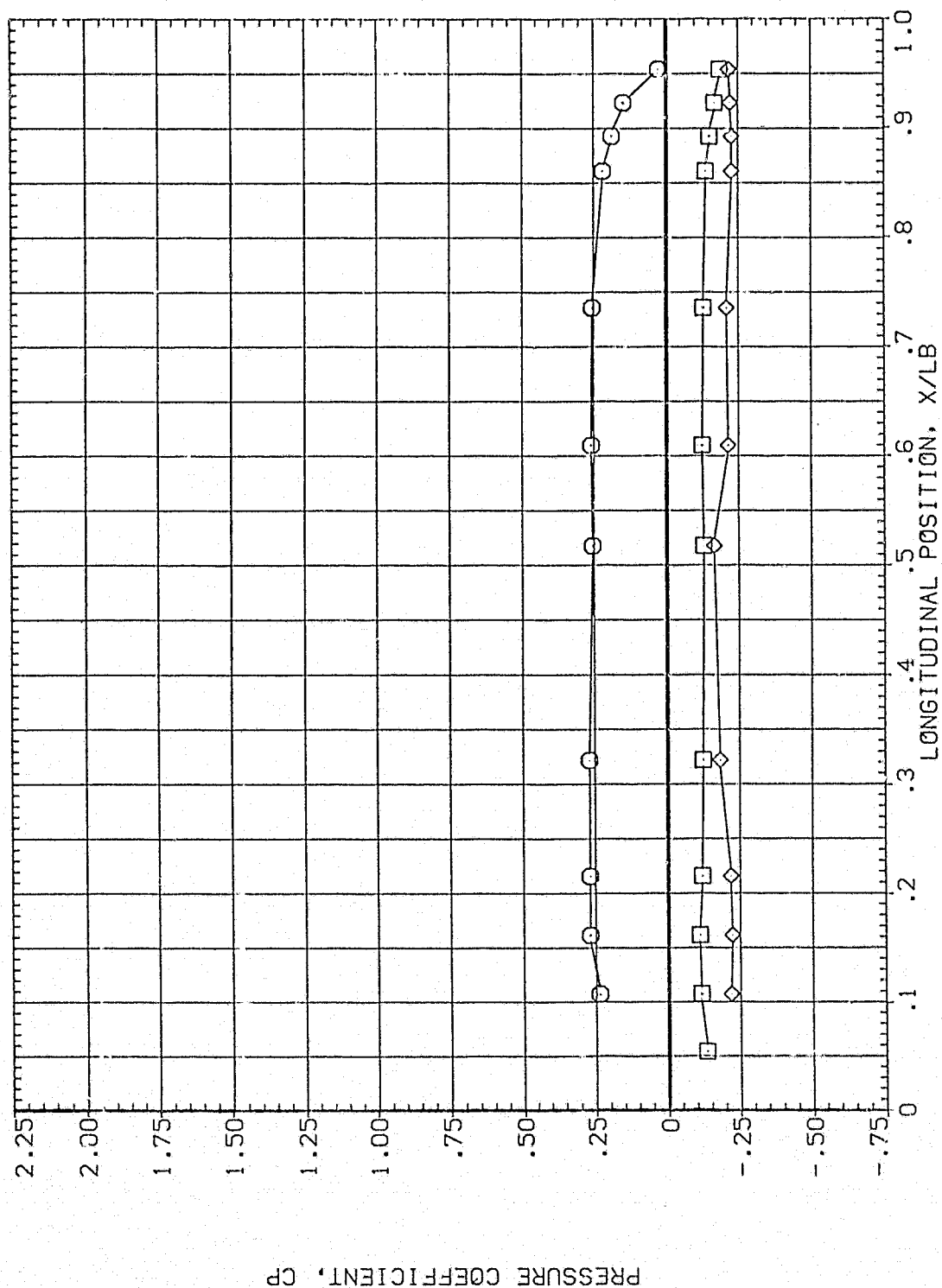


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	84.830	1.970	MOUNT	.000
□	326.000				2.000
◇	346.000				90.000
					PHI
					.000

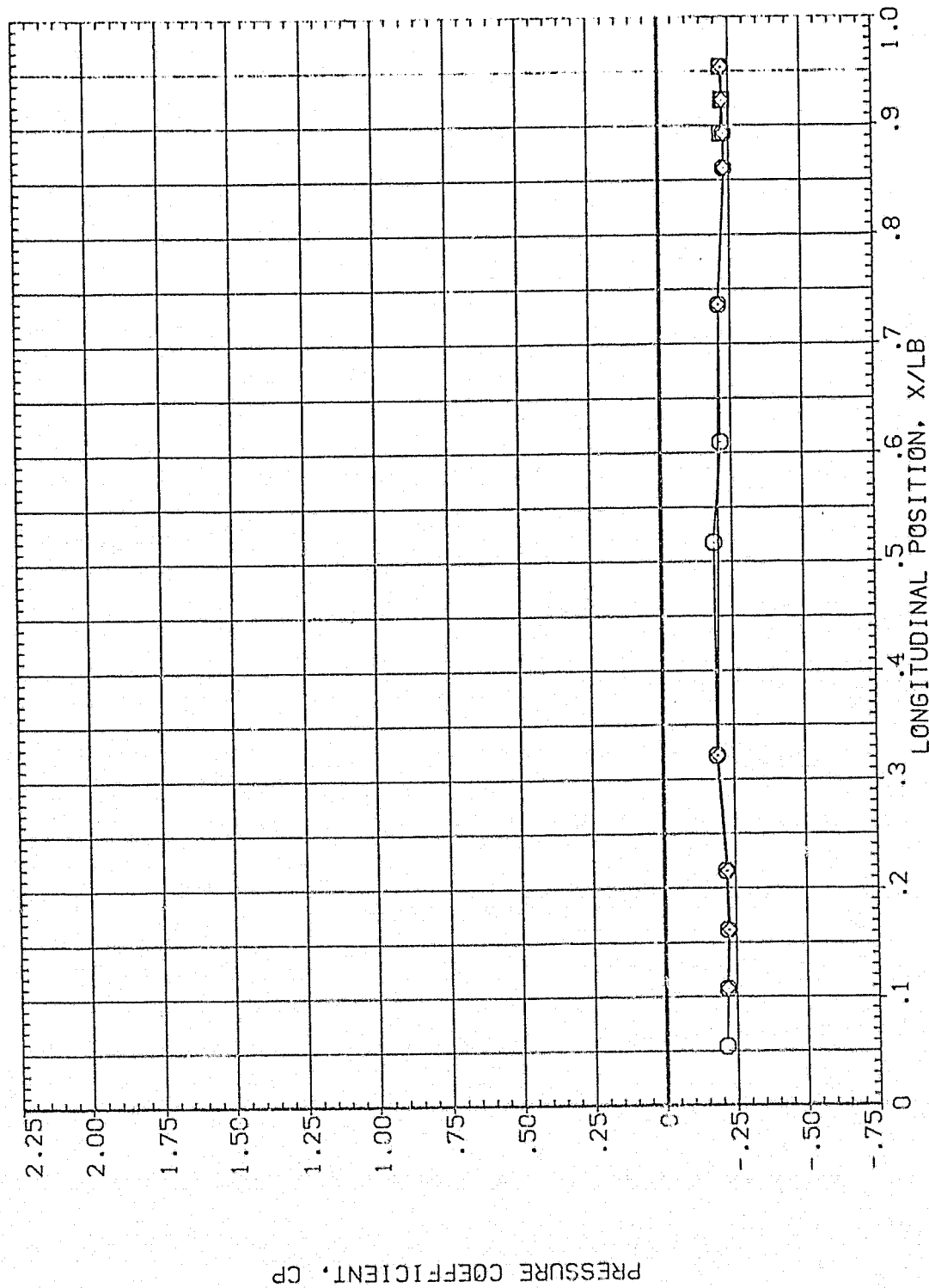


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES		
	.000	14.000	87.830	1.970	BETA	OFFSET	.000	2.000	90.000
□	14.000				MGUNT	PHI			.000
◇	24.000								

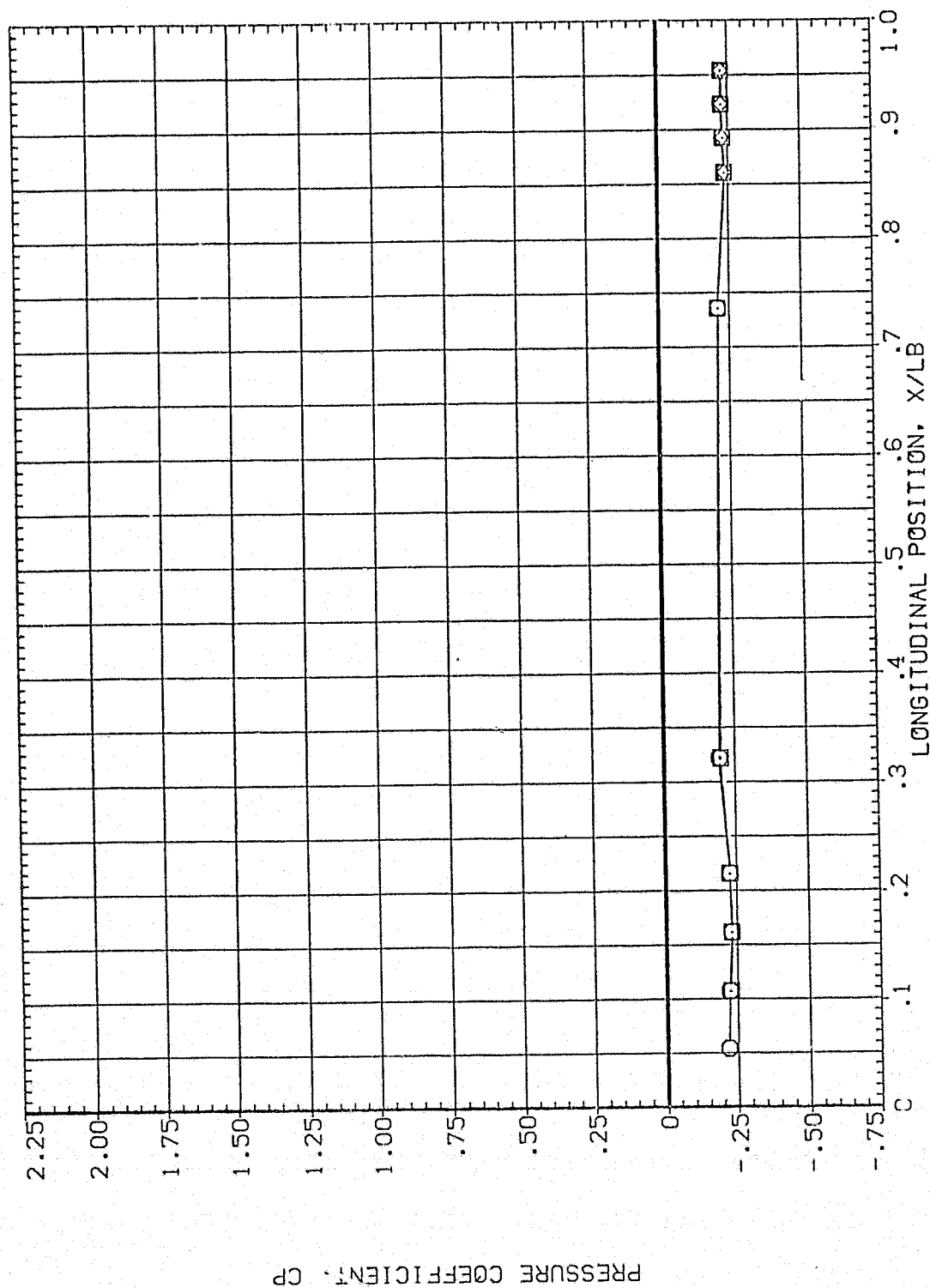


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
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(P1A075)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

PARAMETRIC VALUES
90.000
.000

OFFSET
PHI

BETA
MOUNT

MACH
1.970

ALPHA
87.830

THETA
45.000
67.500
90.000

SYMBOL
◇
□
○

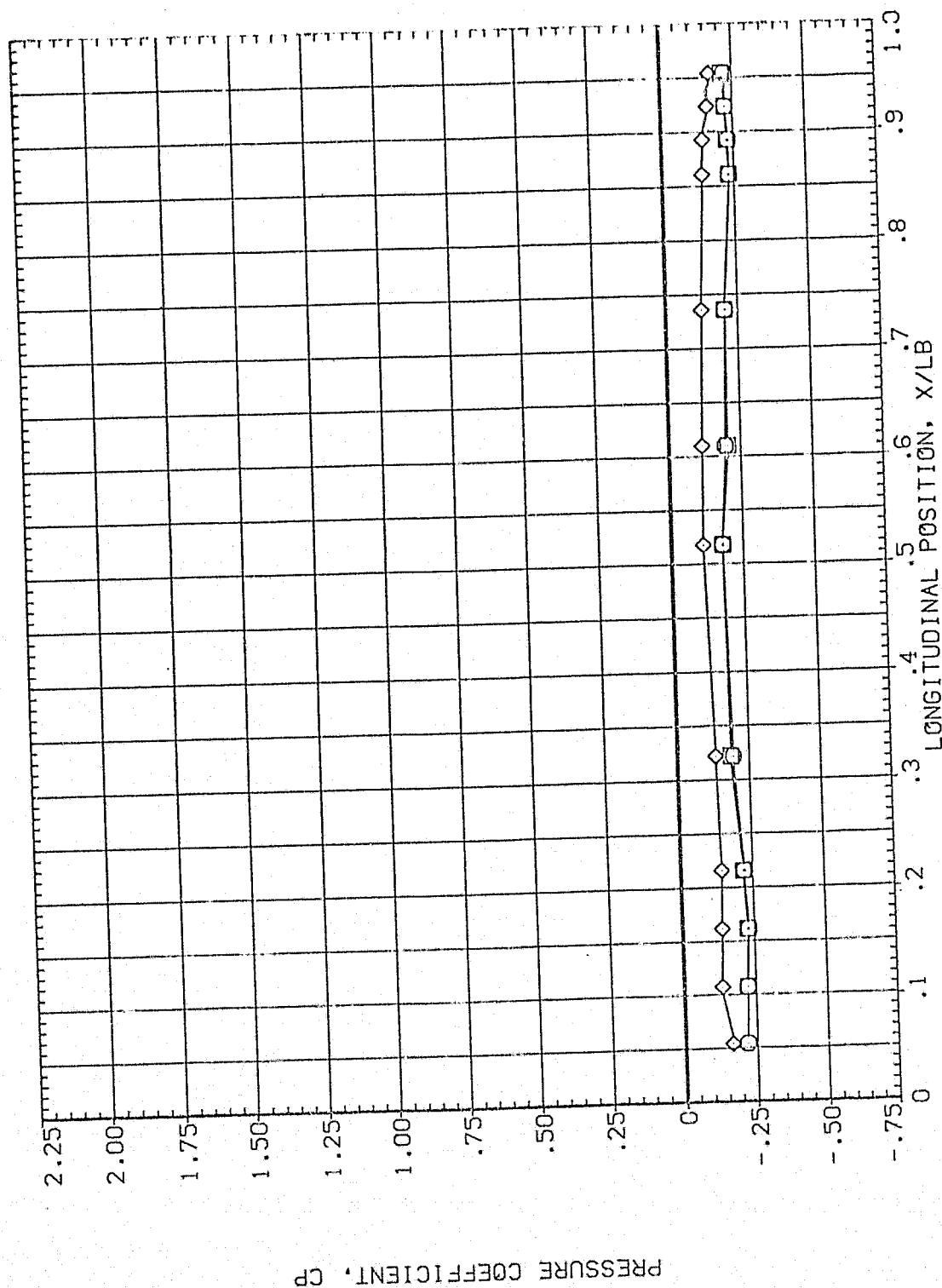


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T2 (P1A075)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	112.500	87.830	1.970	MOUNT	2.000	PHI
□	135.000					.000
◇	157.500					.000

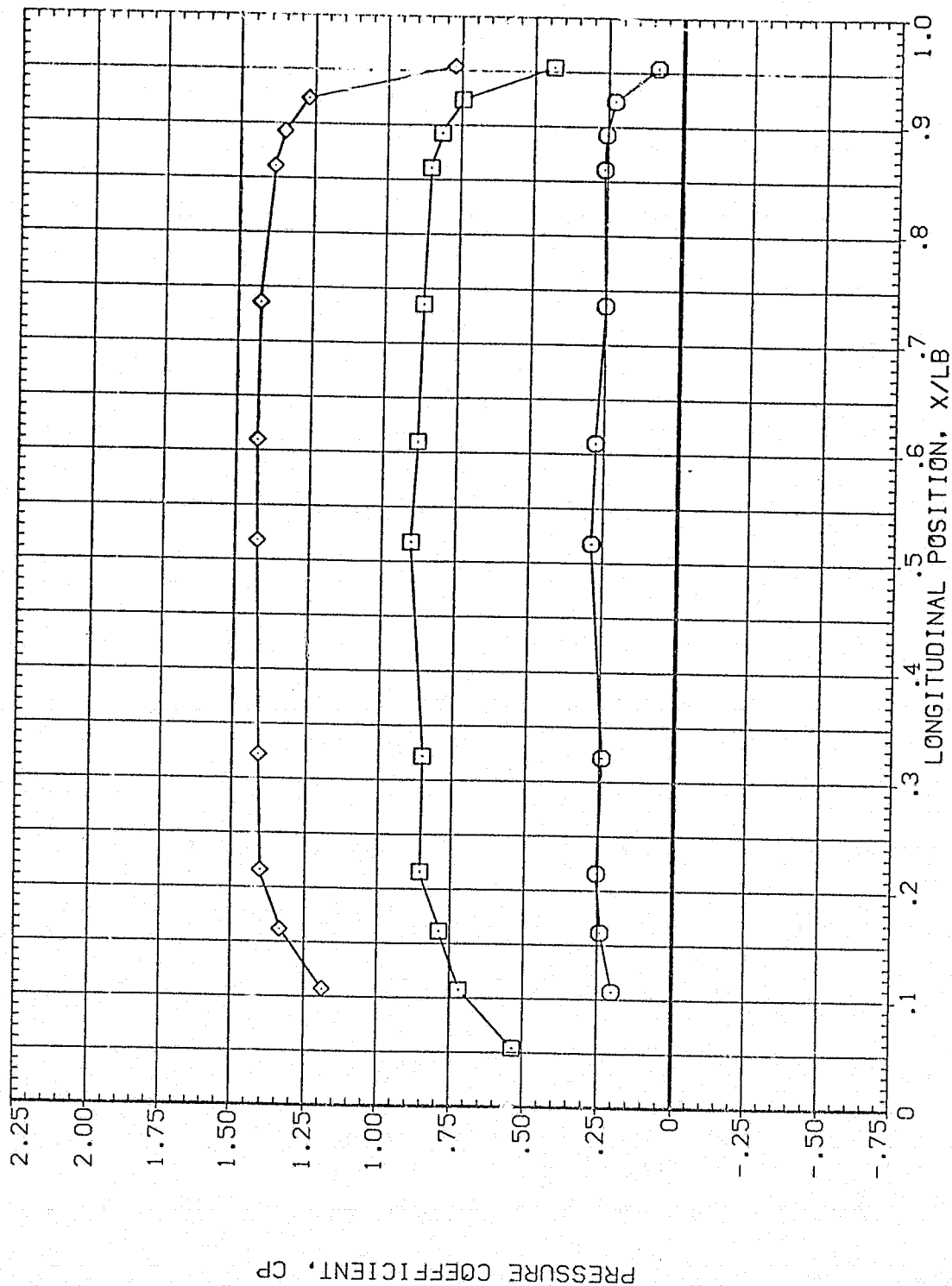


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL THETA ALPHA MACH
 ○ 180.000 87.830 1.970
 □ 202.500
 ◇ 225.000

PARAMETRIC VALUES
 BETA .000 OFFSET 90.000
 MOUNT 2.000 PHI .000

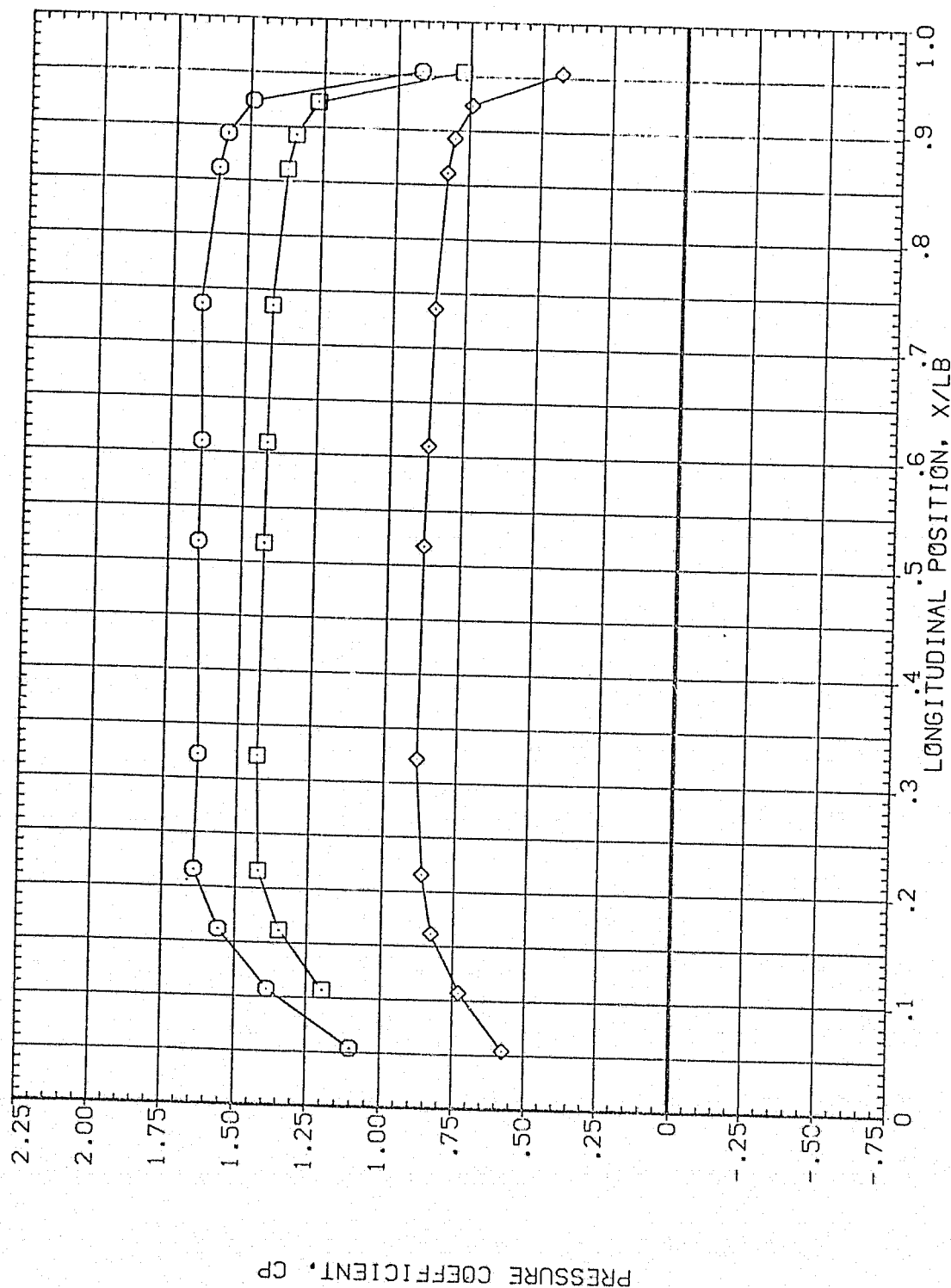


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	97.930	1.970	MOUNT	.000
◇	270.000			PHI	2.000
◇	292.500				.000

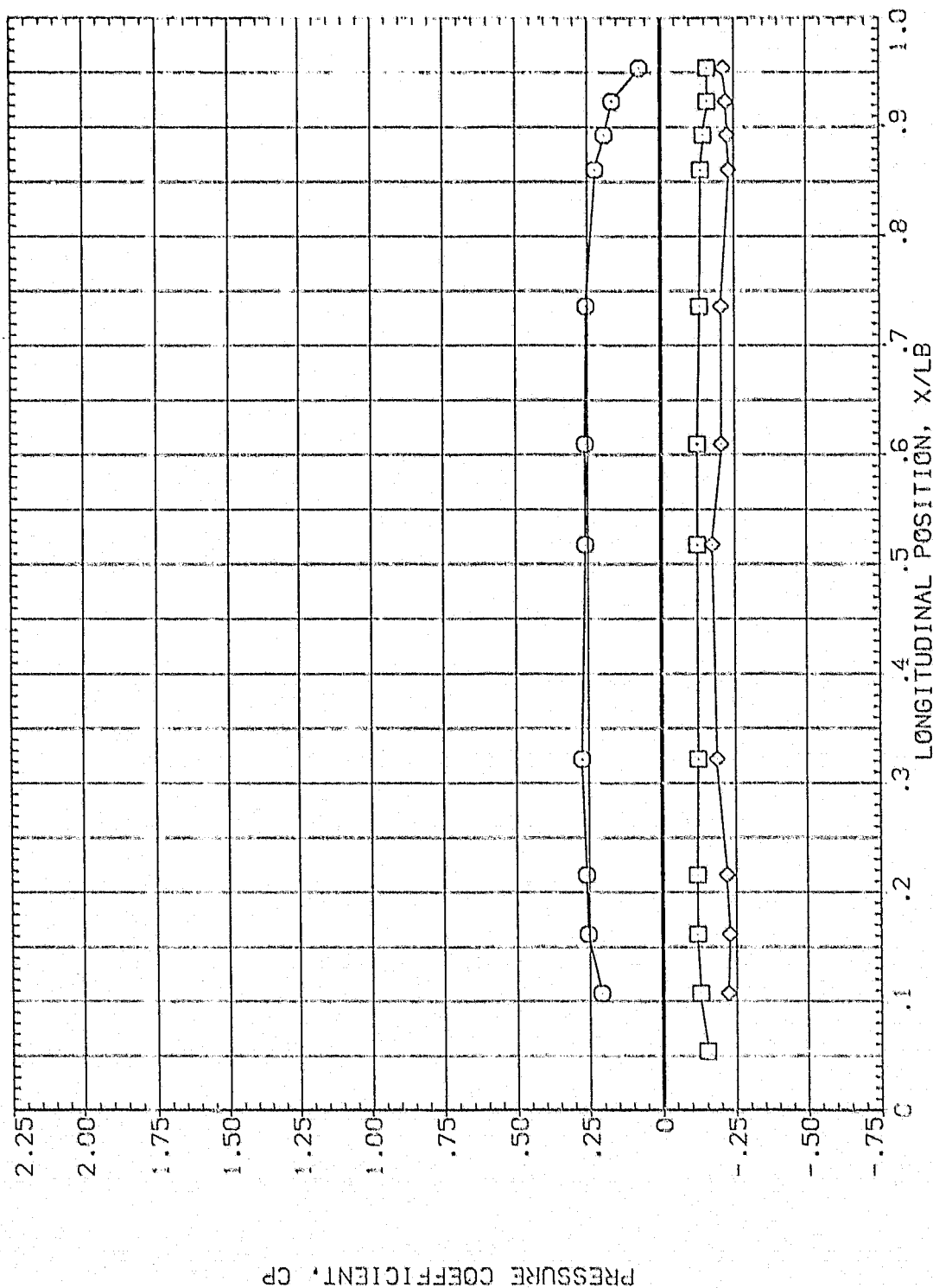


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 PHI 90.000
 .000
 .000

SYMBOL THETA ALPHA MACH
 315.000 87.830 1.970
 328.000
 346.000

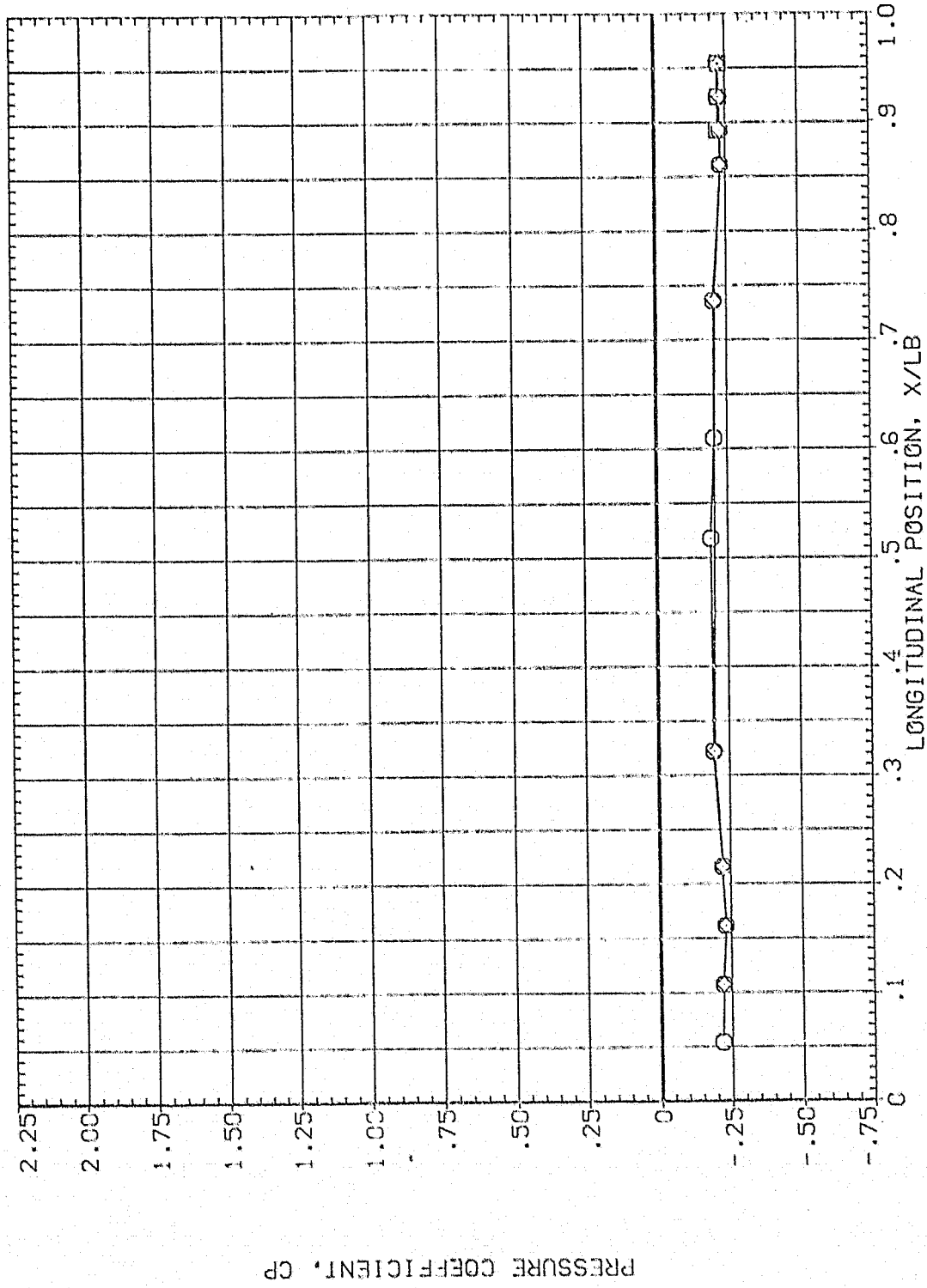


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
 □
 ○
 ◇

THETA .000
 14.000
 24.000

ALPHA 89.830

MACH 1.960

PARAMETRIC VALUES

BETA .000
 MOUNT 2.000

OFFSET 90.000
 PHI .000

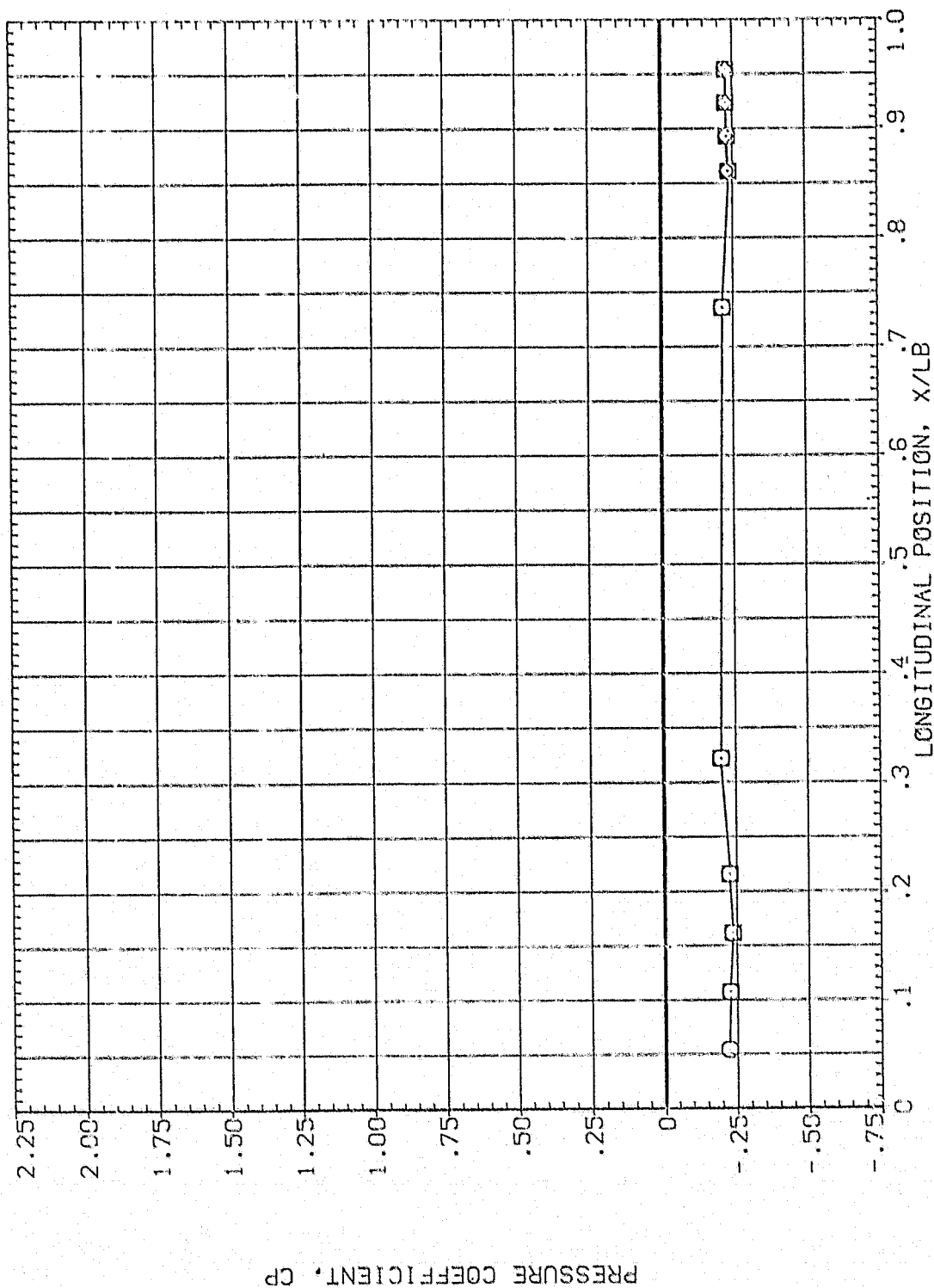


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

PARAMETRIC VALUES
BETA .000
MCOUNT 2.000
OFFSET PHI .000

THETA ALPHA MACH
45.000 89.830 1.980

SYMBOL
45.000
67.500
90.000

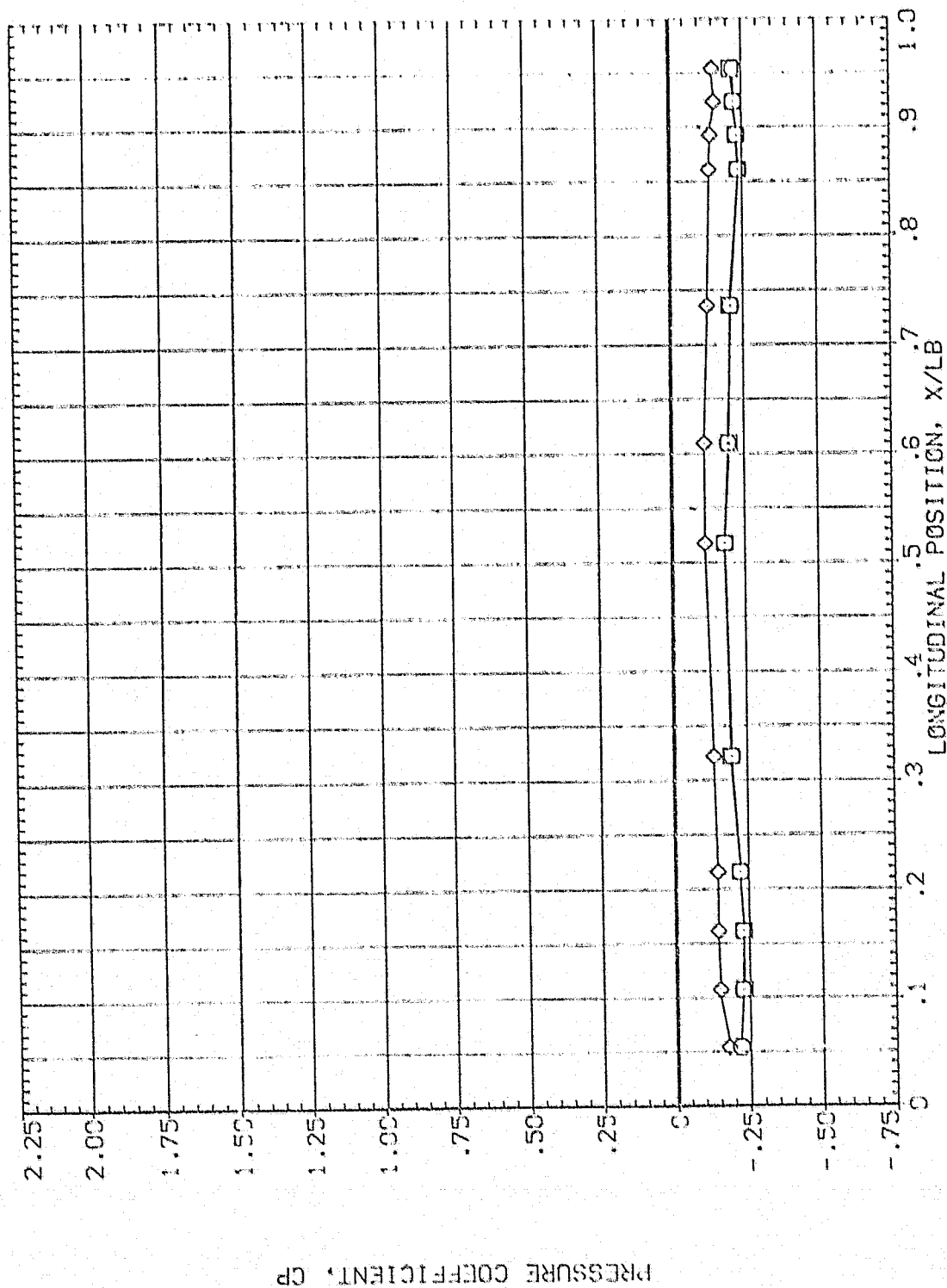


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	112.500	89.839	1.960	MCOUNT	.000
□	135.000			OFFSET	90.000
◇	157.500			PHI	.000

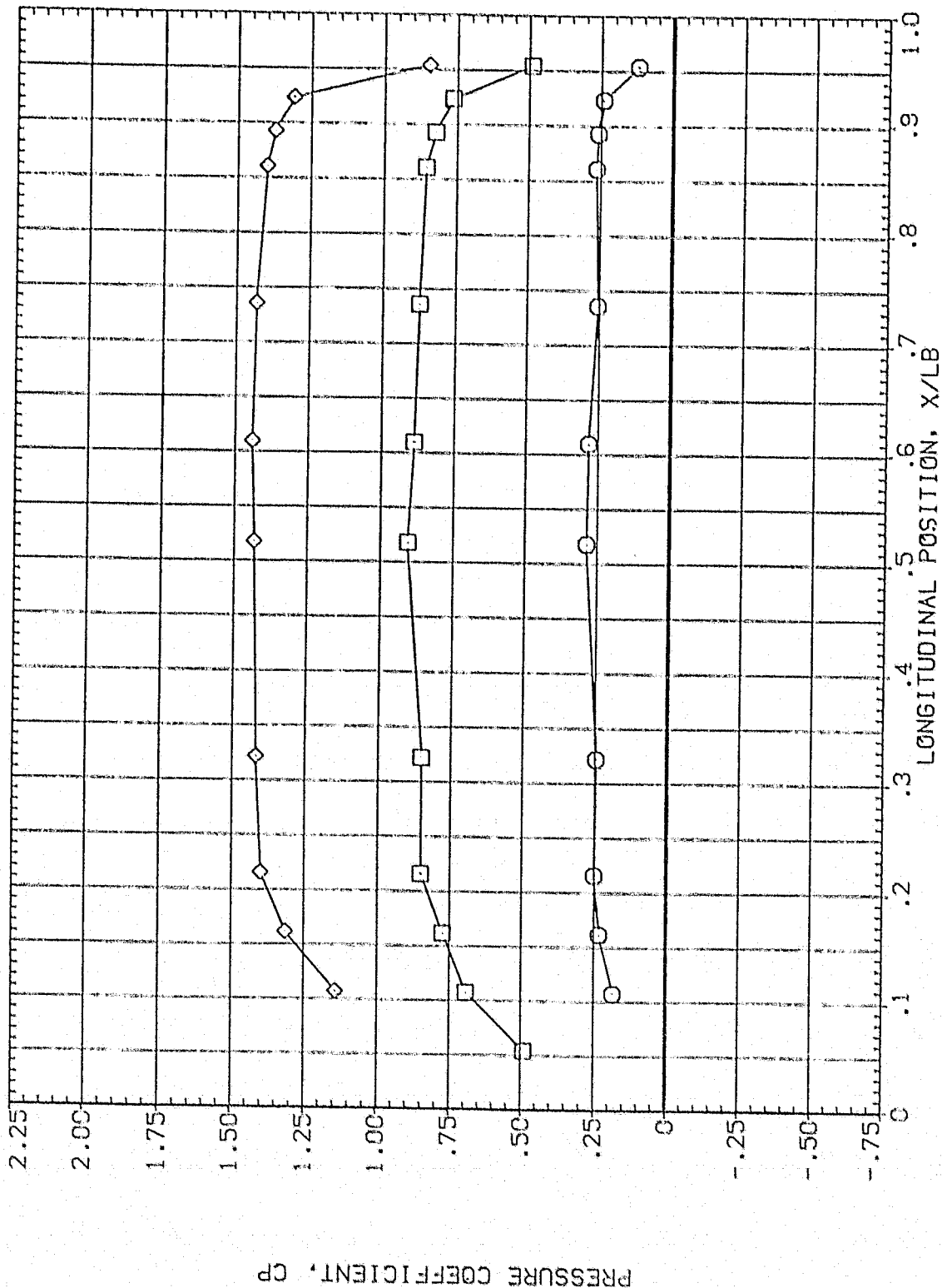


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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ORIGINAL PAGE IS POOR

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL

THETA
180.000
202.500
225.000

ALPHA
89.830

MACH
1.960

PARAMETRIC VALUES
BETA
MOUNT .000 2.000 90.000
PHI .000

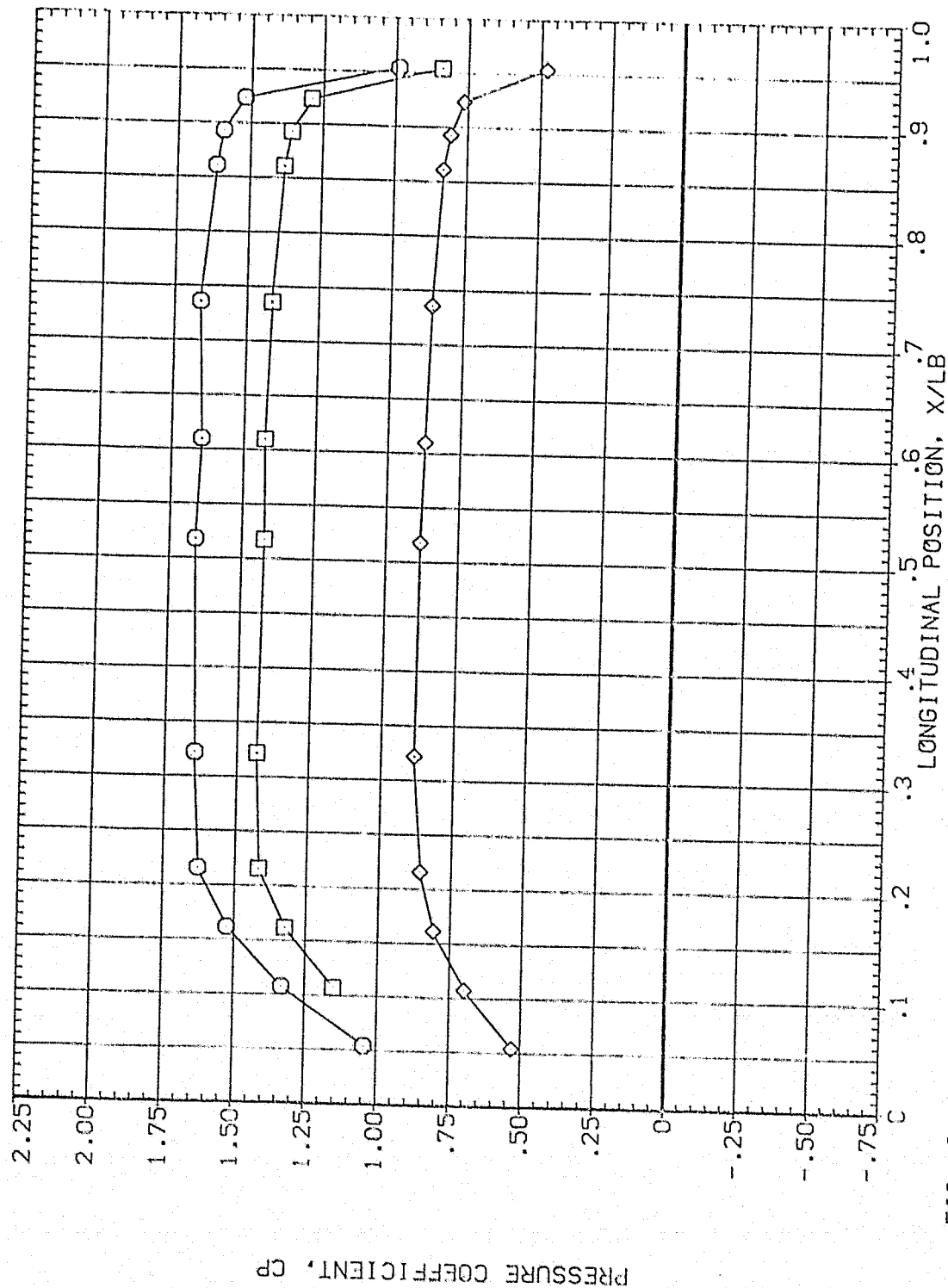


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL THETA ALPHA MACH
 O 247.500 89.830 1.960
 □ 270.000
 ◇ 292.500

PARAMETRIC VALUES
 BETA MOUNT .000 OFFSET 90.000
 PHI 2.000 .000

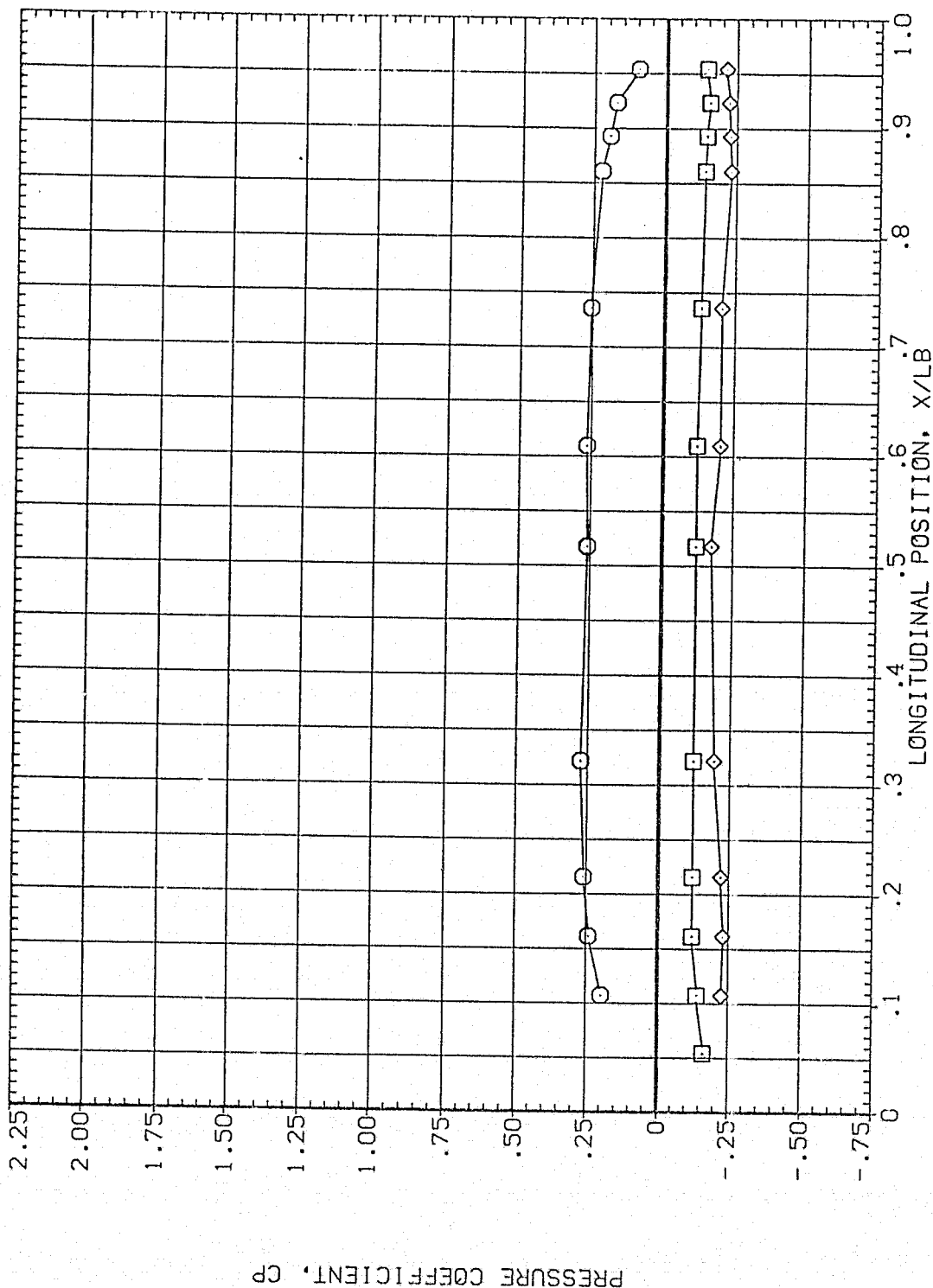


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI
 90.000
 .000

THETA ALPHA MACH
 315.000 89.830 1.980
 326.000
 346.000

SYMBOL
 ○
 □
 ◇

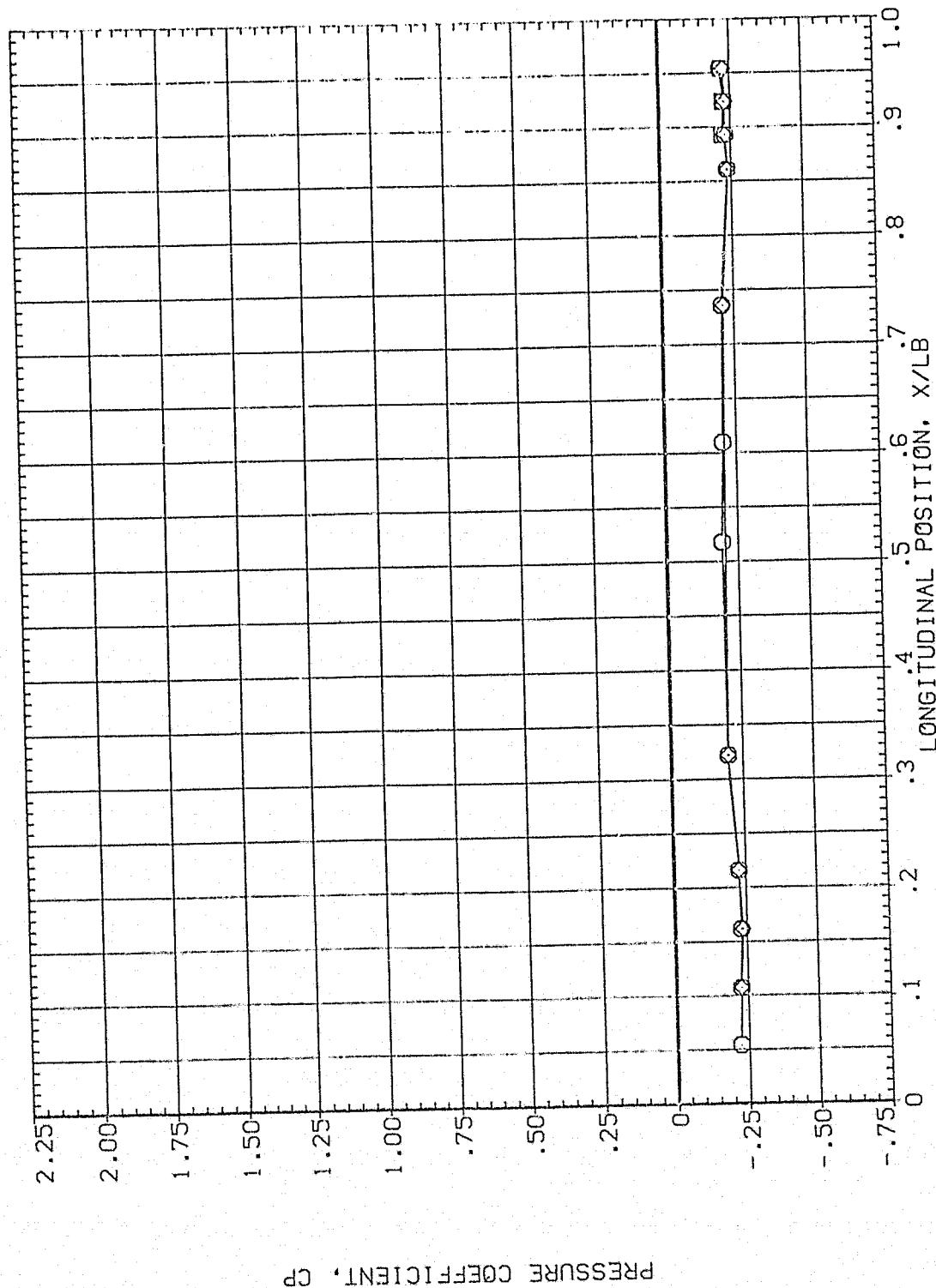


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
□	.000	91.830	1.960	MOUNT	2.000	PHI
◇	14.000					.000
◇	24.000					

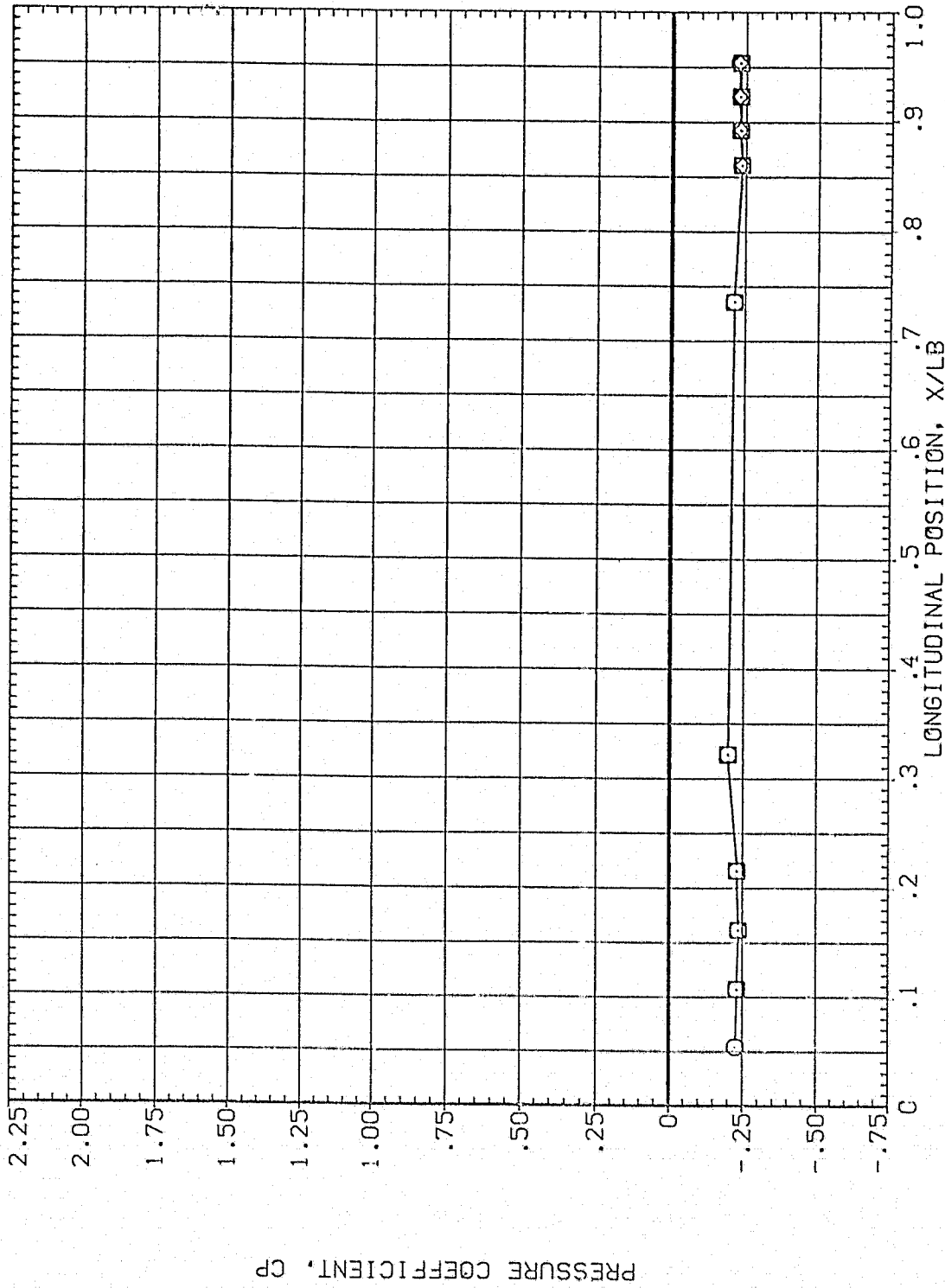


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
 ◇
 □
 ○

THETA
 45.000
 67.500
 90.000

ALPHA
 91.830

MACH
 1.960

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 OFFSET
 PHI
 90.000
 .000

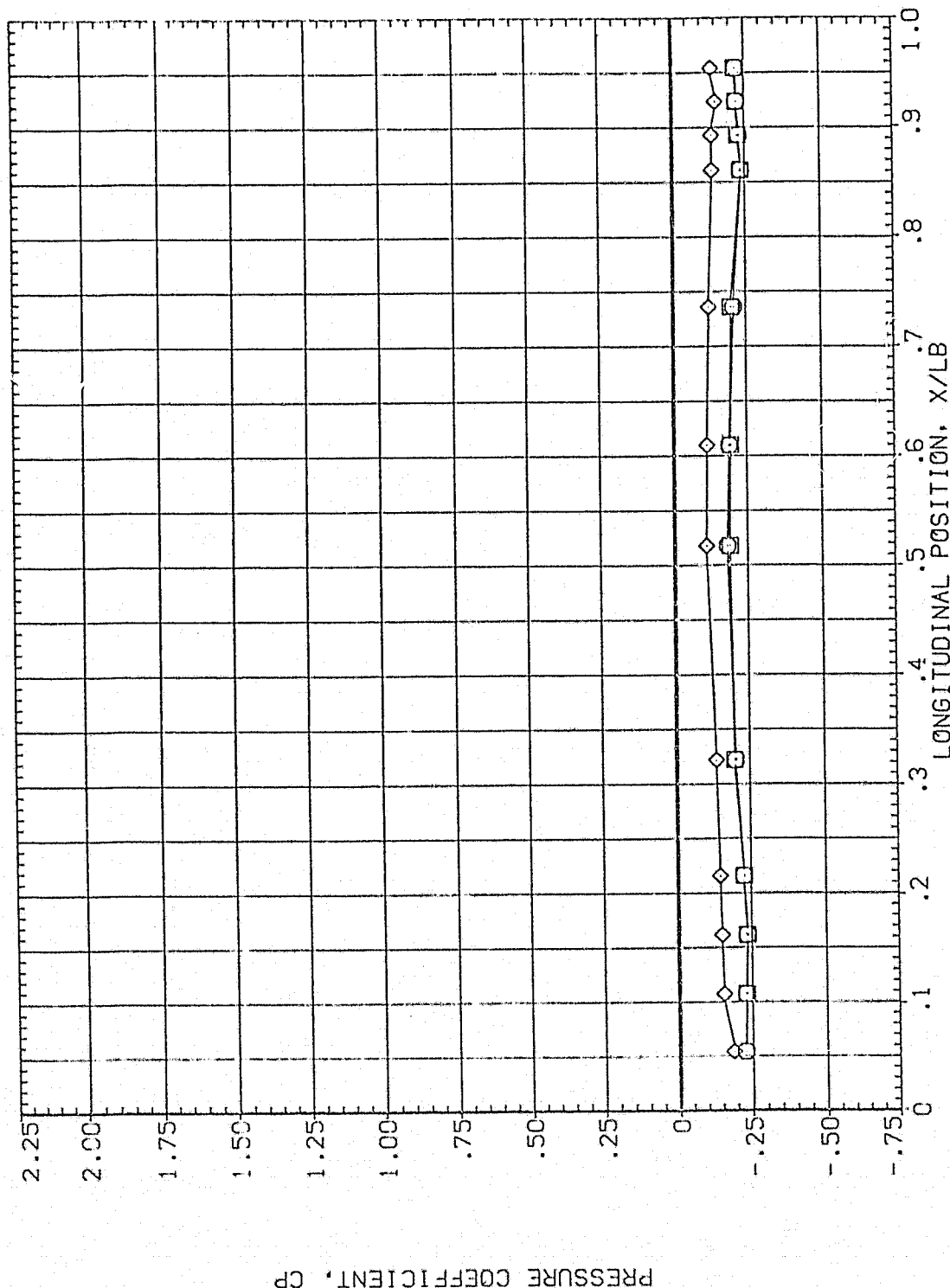


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL THETA ALPHA MACH
 O 112.500 91.830 1.960
 □ 135.000
 ◇ 157.500

PARAMETRIC VALUES
 BETA .000 .05FSE7 90.000
 MOUNT 2.000 PH1 .000

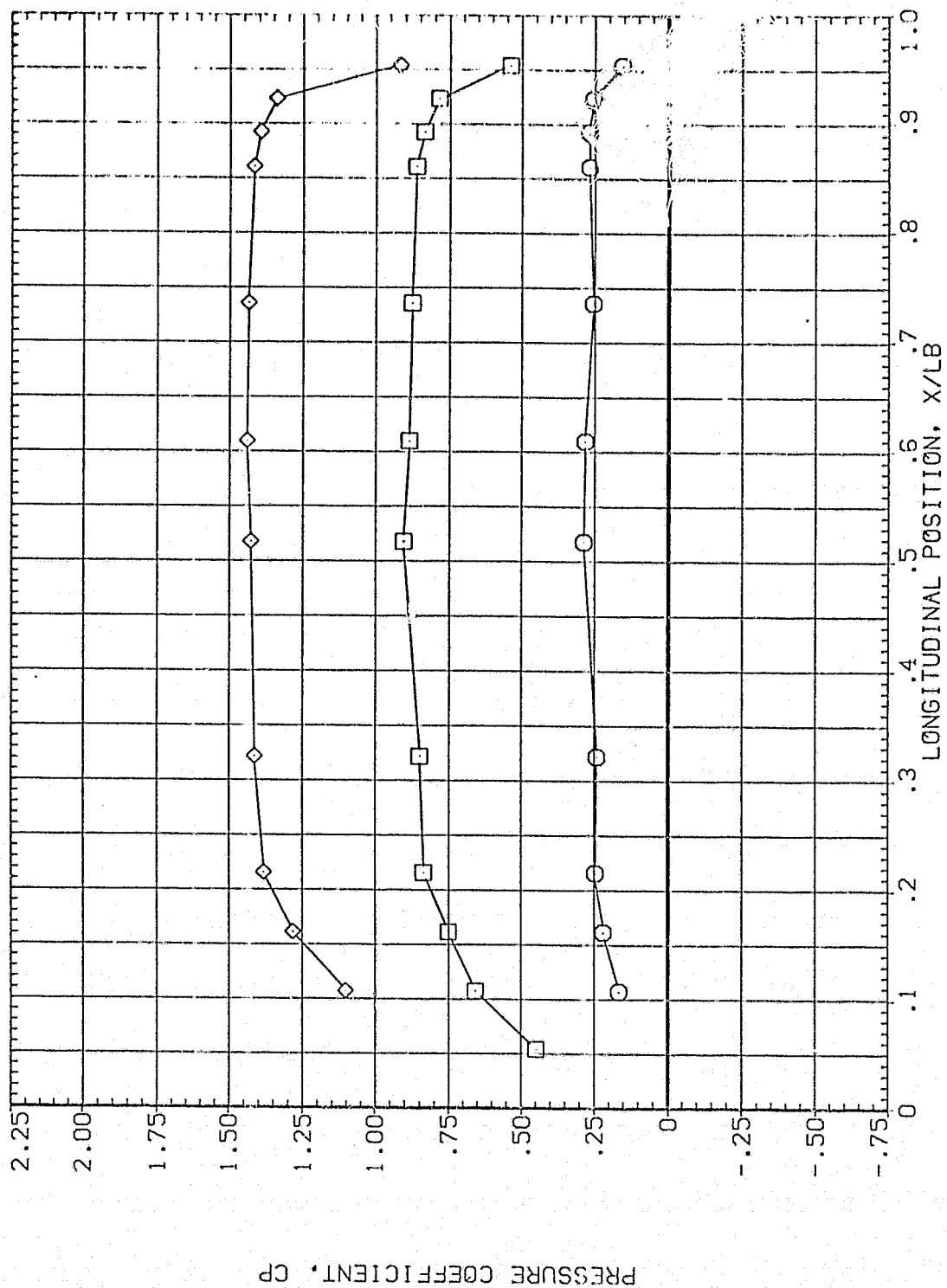


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA077)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	180.000	91.830	1.960	MOUNT	.000	.000
□	202.500				2.000	
◇	225.000					

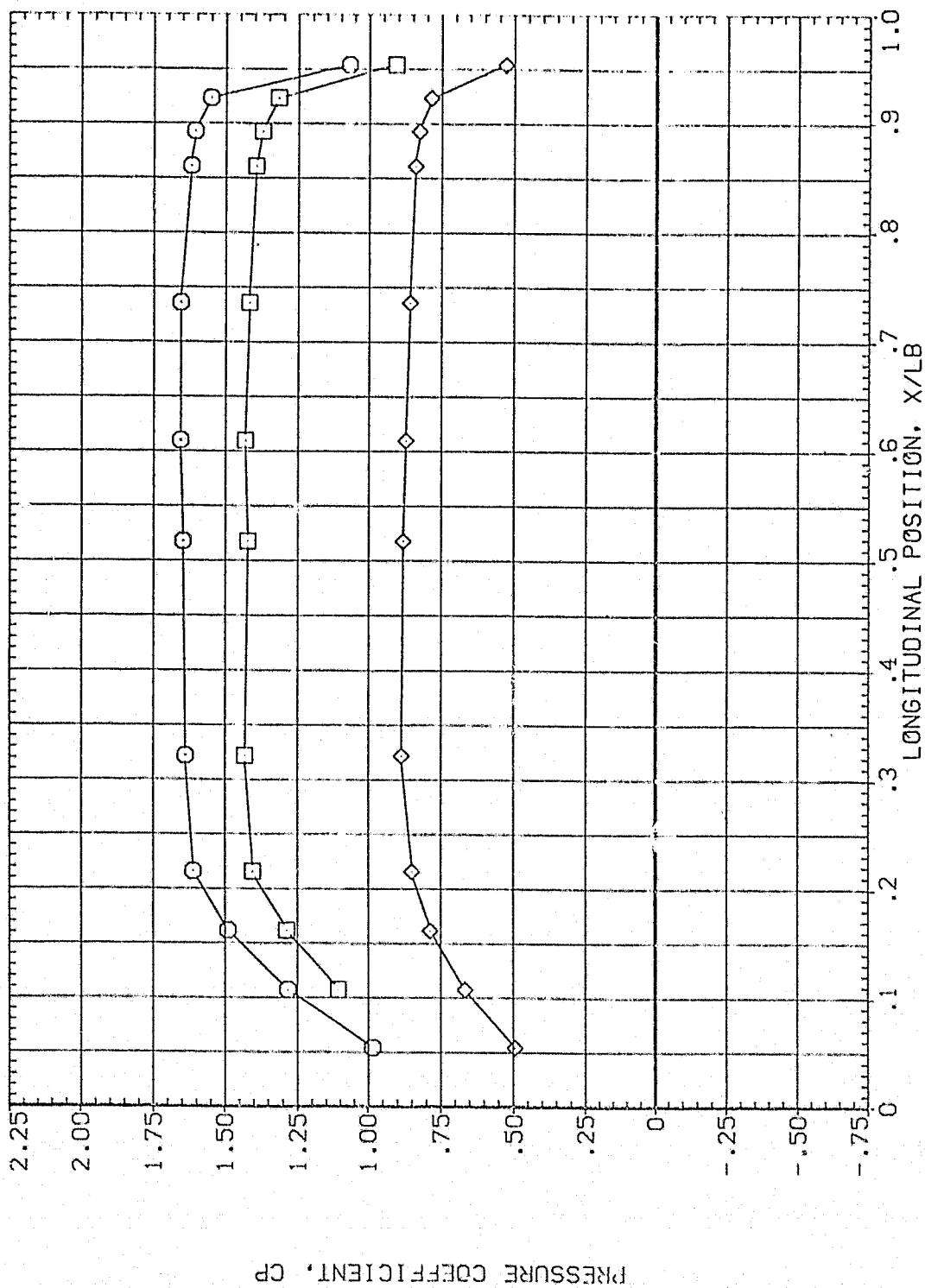


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	91.830	1.960	MOUNT	.000
□	270.000				2.000
◇	292.500				PHI
					90.000
					.000

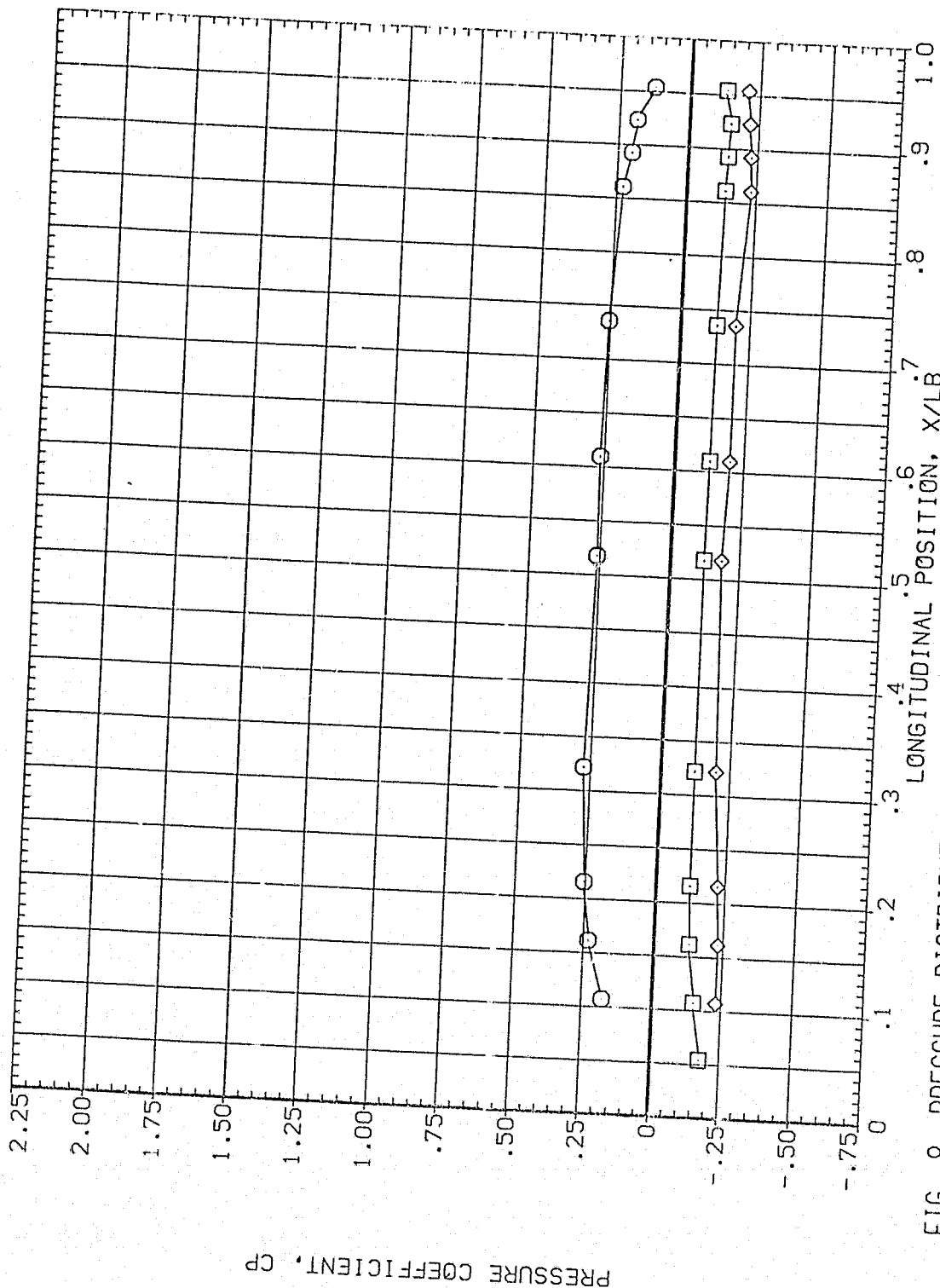


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	91.830	1.960	MMOUNT	.000 OFFSET
□	326.000				2.000 PHI
◇	346.000				.000

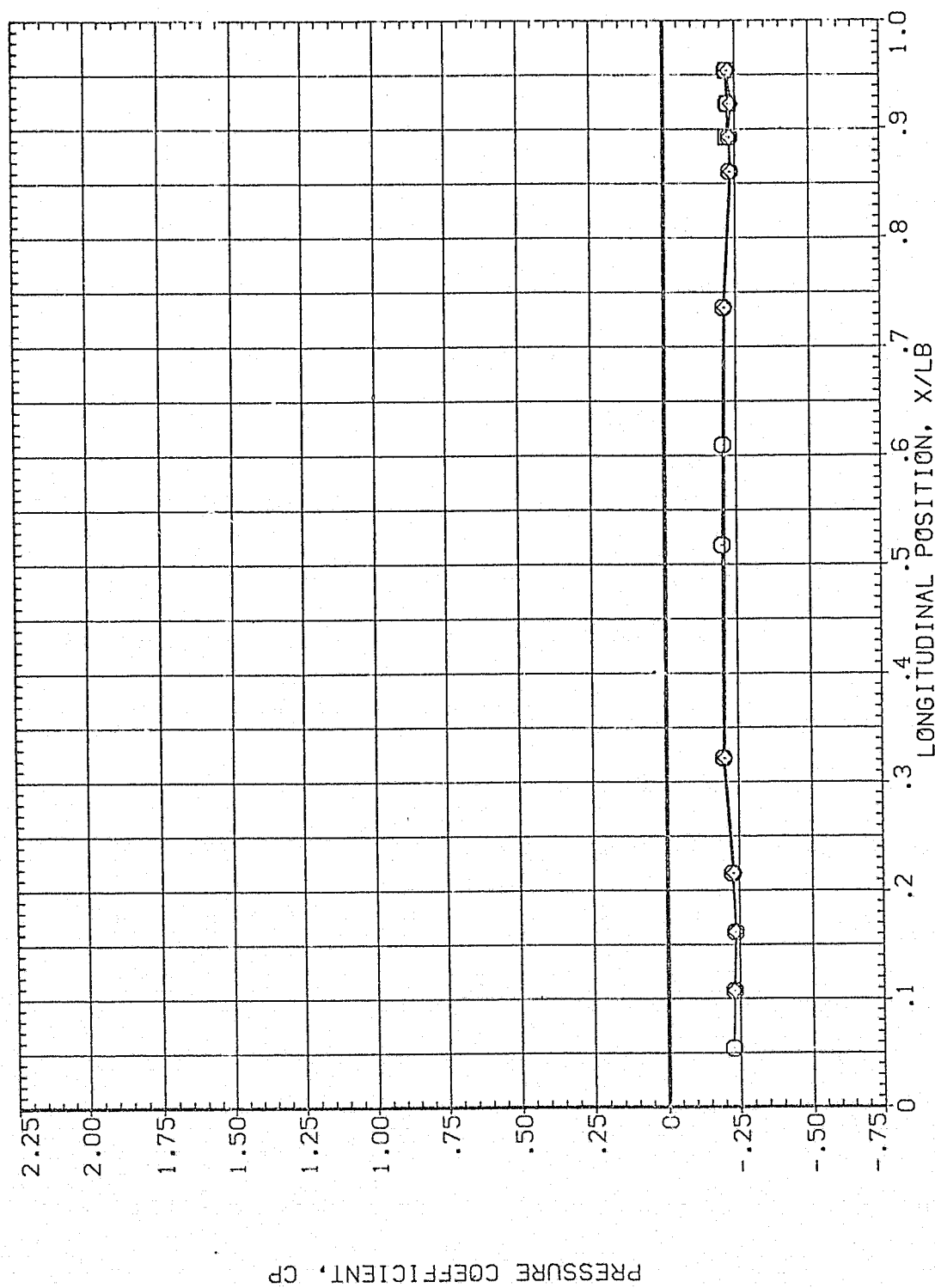


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 .000 OFFSET
 2.000 PHI
 90.000
 .000

BETA
 MOUNT

ALPHA
 94.850
 MACH
 1.960

THETA
 .000
 14.000
 24.000

SYMBOL
 □
 ○
 ◇

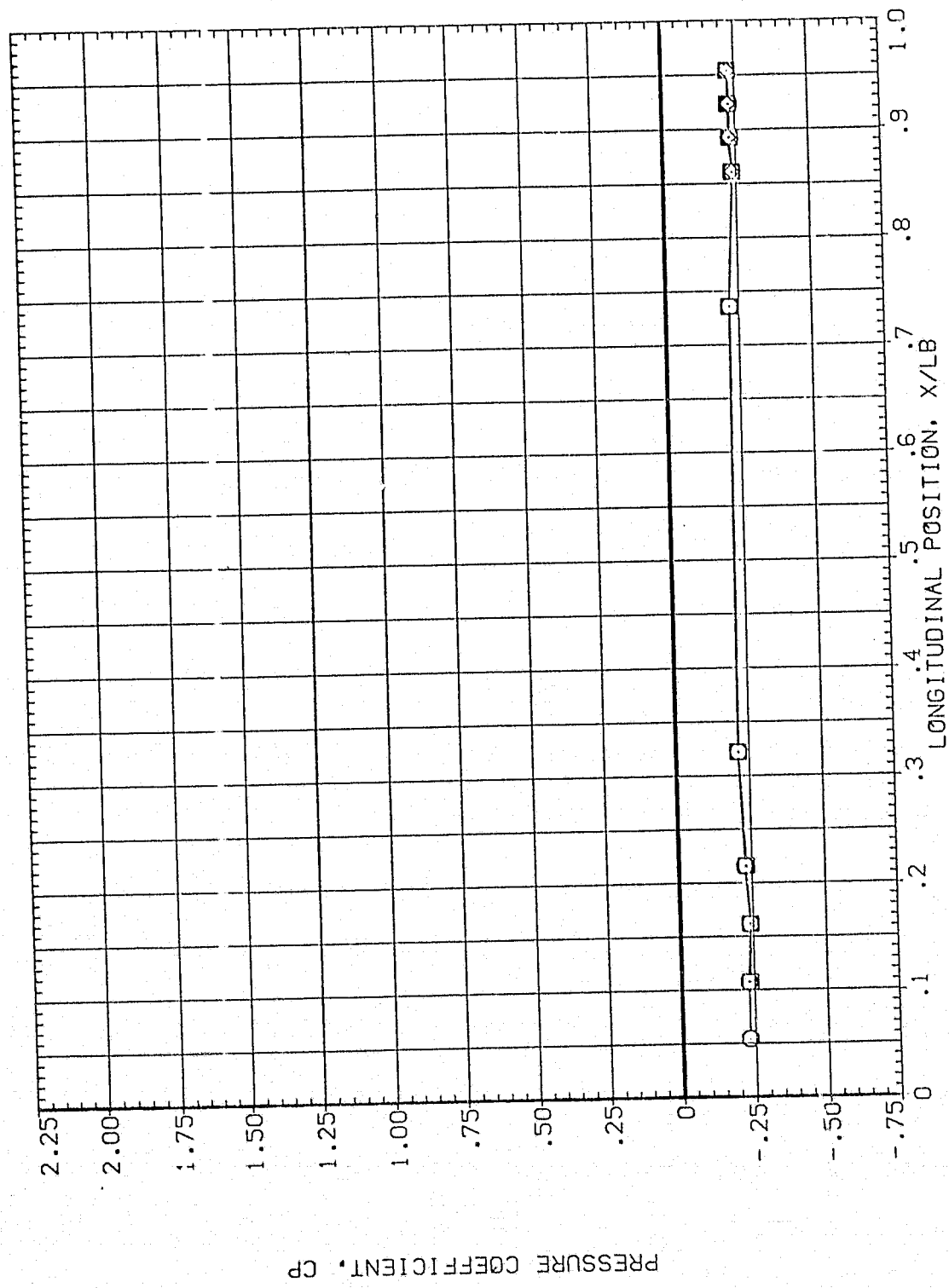


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
◇	45.000	94.850	1.960	MOUNT	2.000	PHI
□	67.500					.000
◇	90.000					

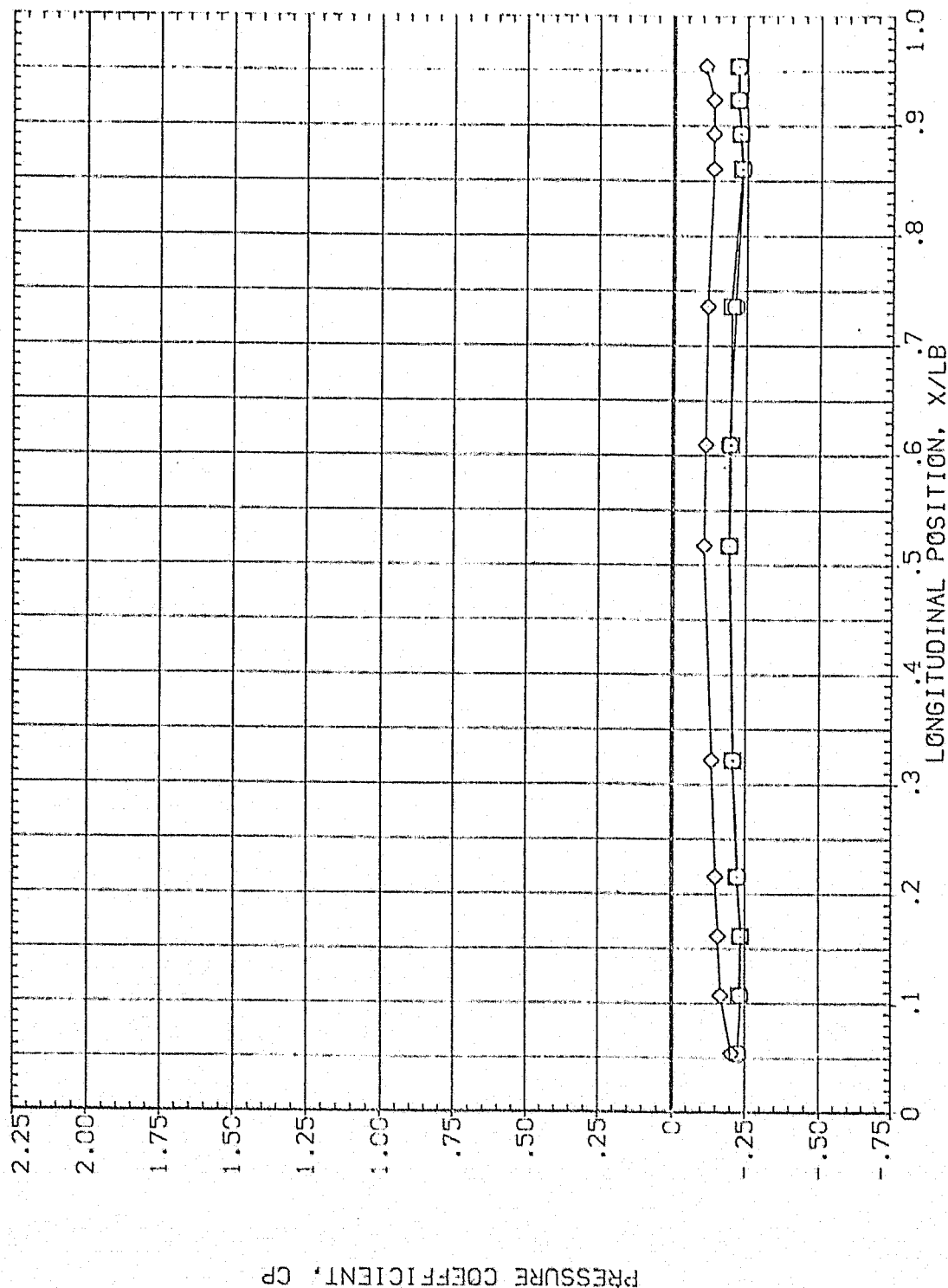


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES



MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL
◇
□
○

THETA
112.500
135.000
157.500

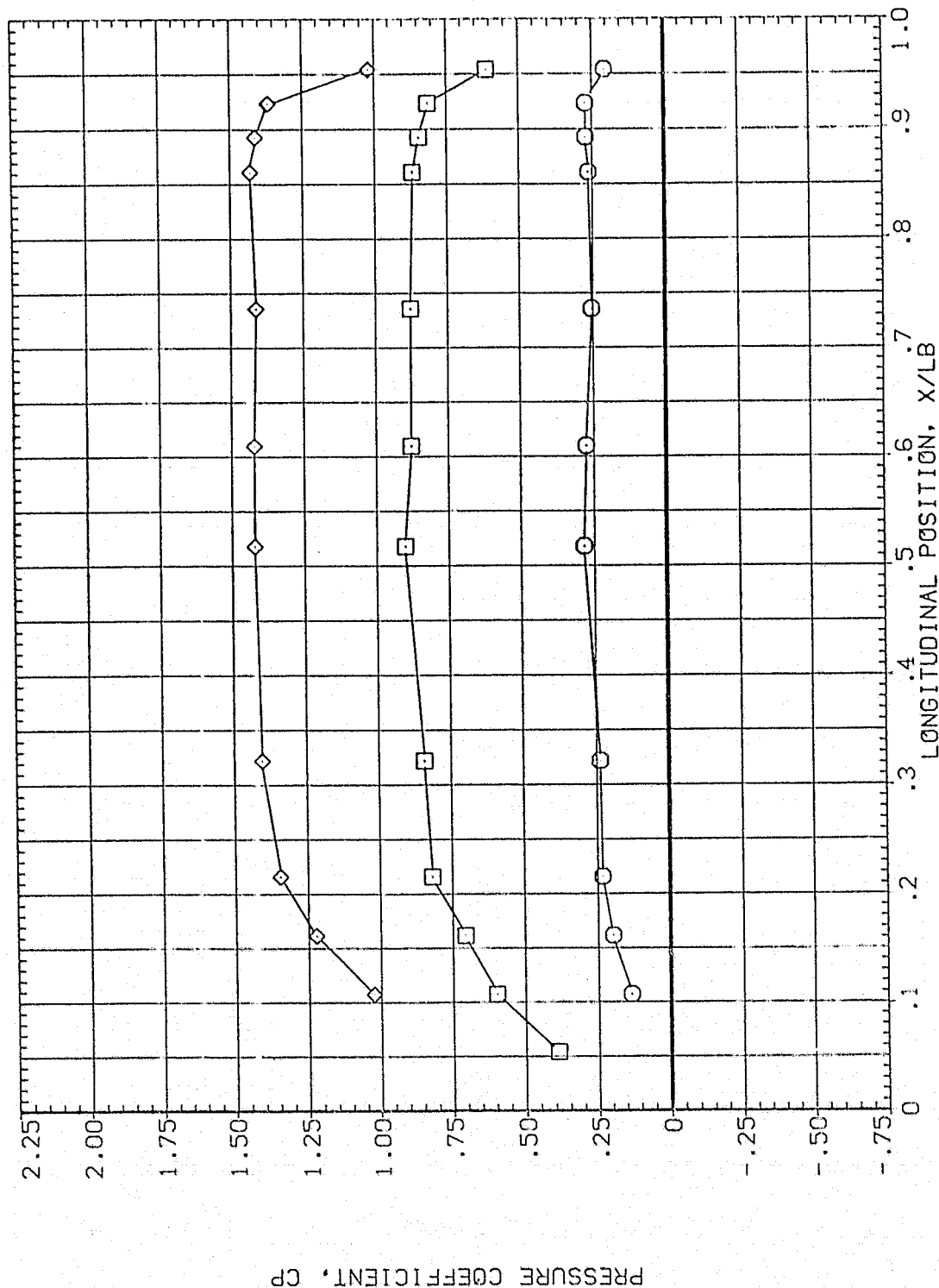
ALPHA
94.850

MACH
1.960

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
PHI

90.000
.000



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ORIGINAL PAGE IS POOR

FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

PARAMETRIC VALUES
 .000 OFFSET
 2.000 PHI
 90.000

SYMBOL THETA ALPHA MACH
 ○ 180.000 94.850 1.960
 □ 202.500
 ◇ 225.000

BETA
 MOUNT

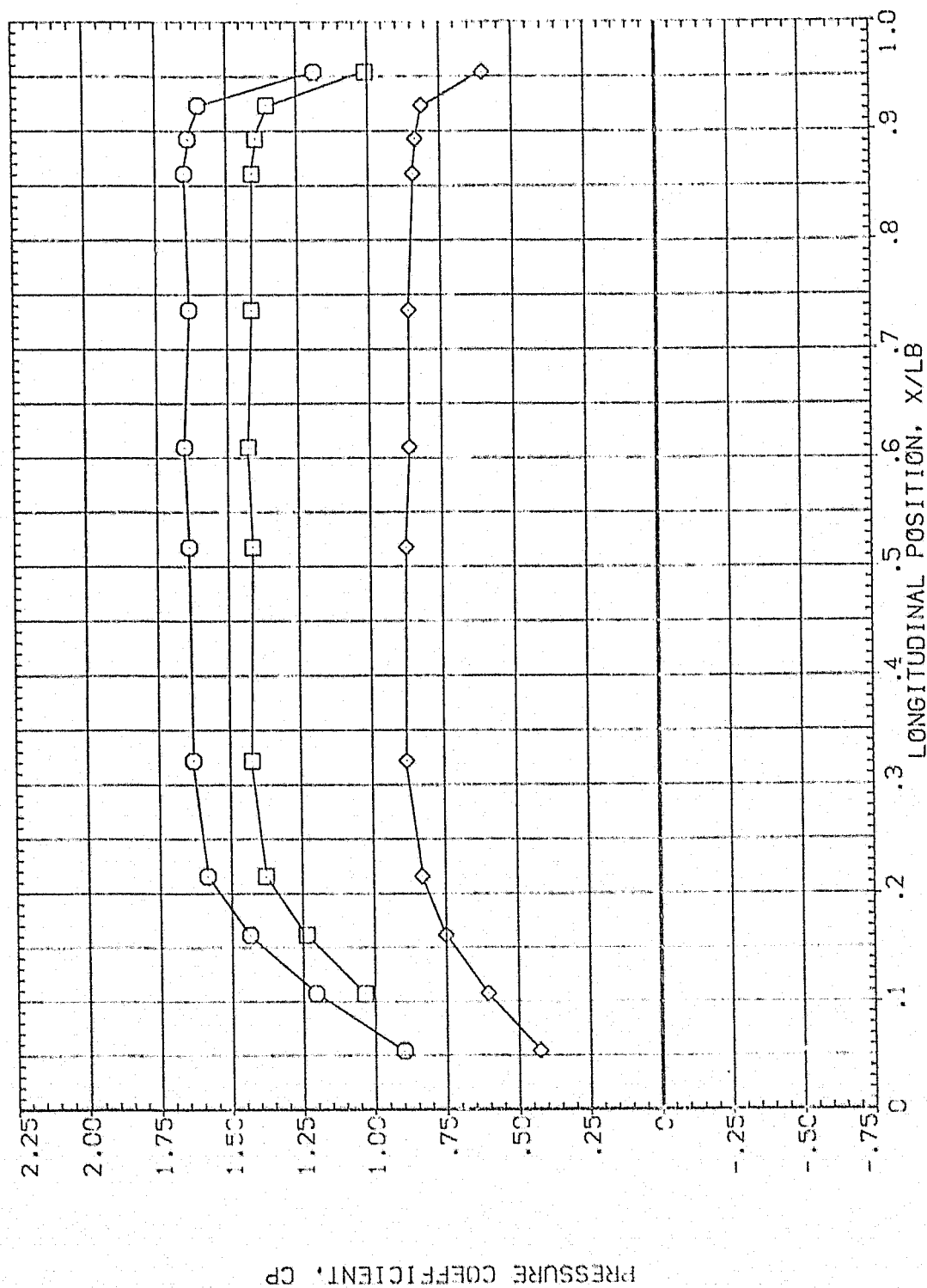


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES		
					.000	OFFSET	90.000
○	247.500	54.850	1.960	HOUNT	2.000	PHI	.000
□	270.000						
◇	292.500						

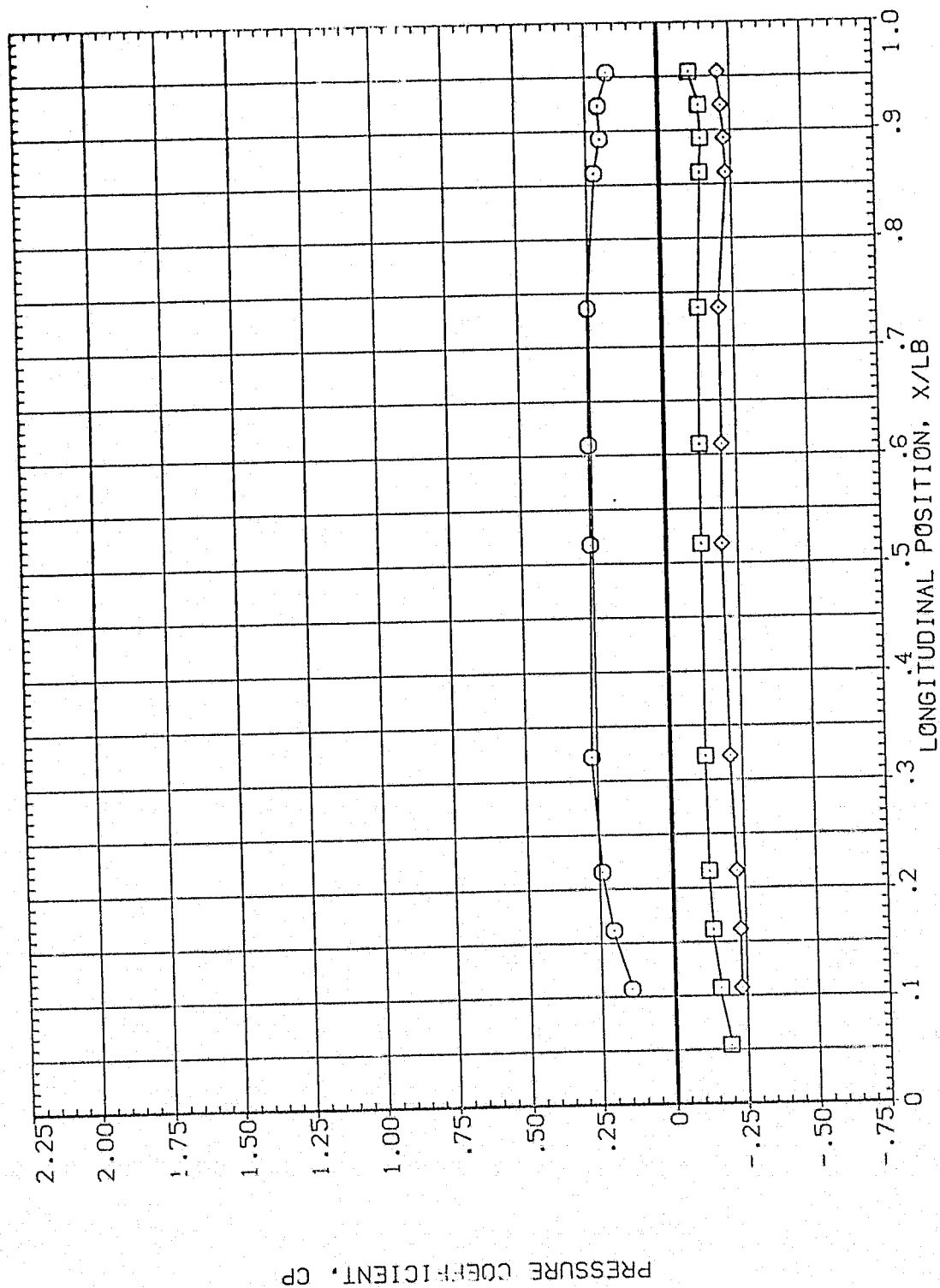


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 .000 OFFSET 90.000
 2.000 PHI .000

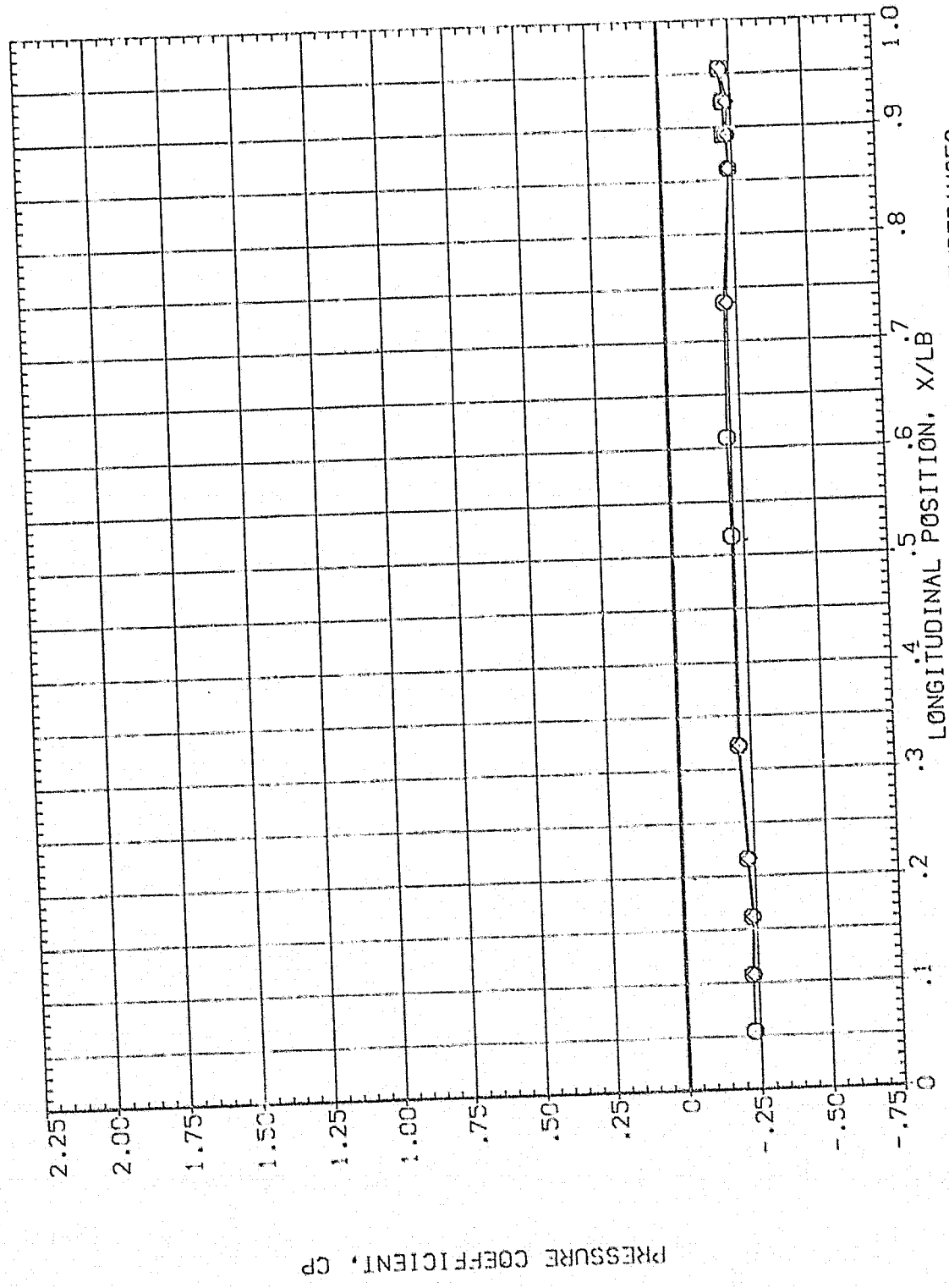
BETA
 MOUNT

MACH
 1.960

ALPHA
 94.850

THETA
 315.000
 326.000
 346.000

SYMBOL
 □
 ◇



PRESSURE COEFFICIENT, CP

FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA079)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.000	97.850	1.970	MOUNT	.000
□	14.000				2.000
◇	24.000			OFFSET	90.000
				PHI	.000

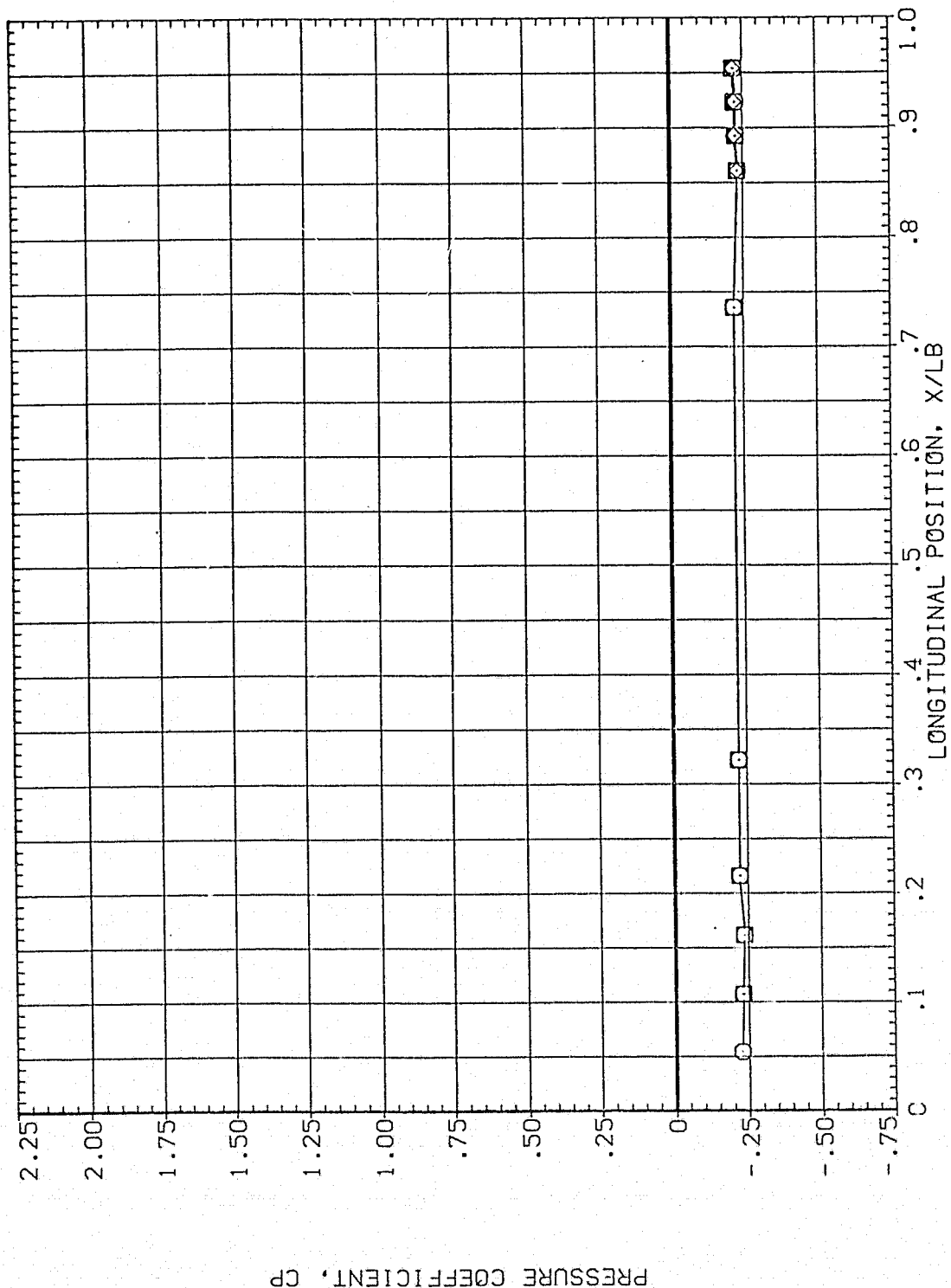


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
◇
□
○

THETA
45.000
67.500
90.000

ALPHA
97.850

MACH
1.970

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
90.000
OFFSET
PHI
.000

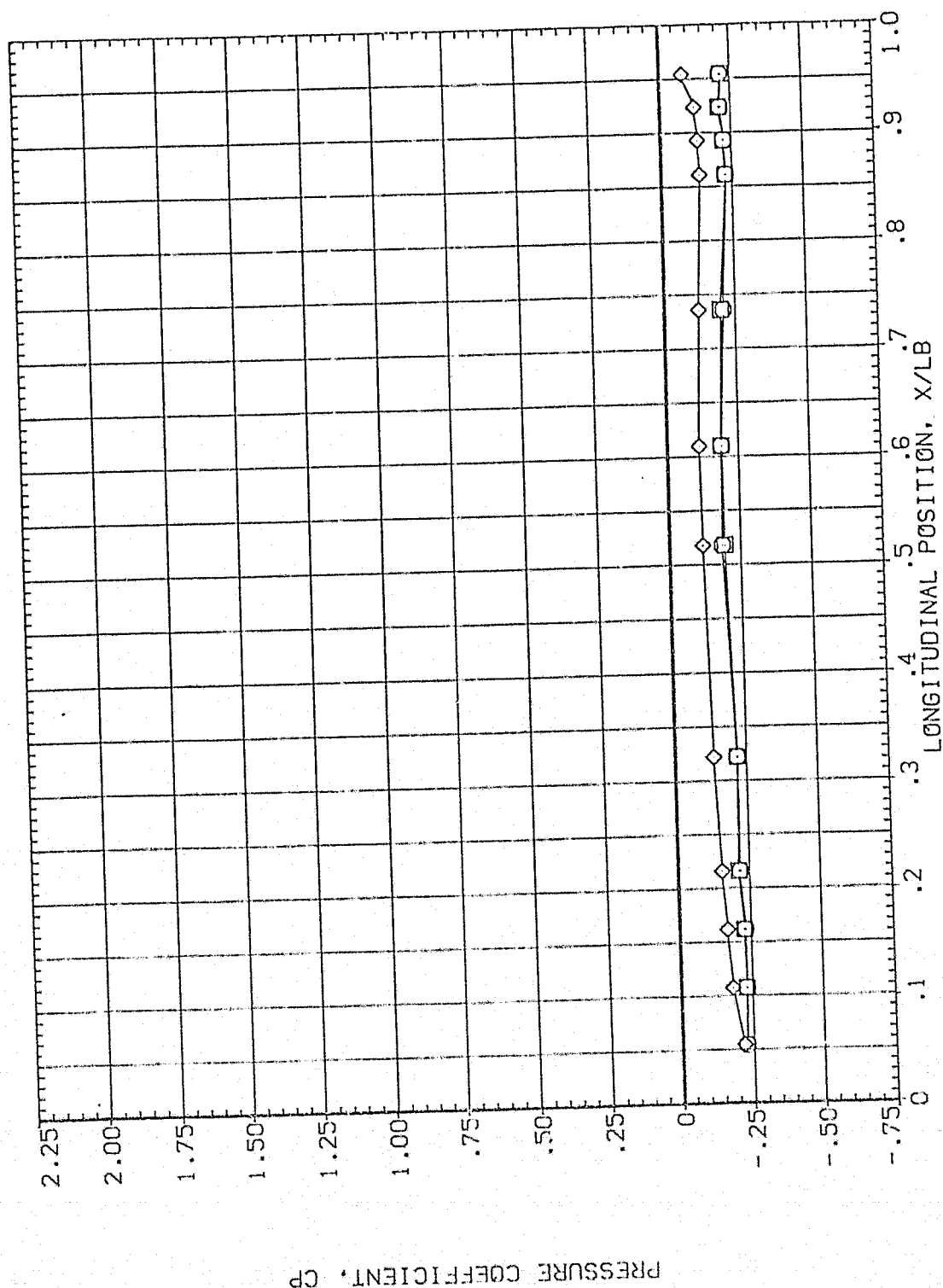


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL	THETA		ALPHA		MACH		BETA		PARAMETRIC VALUES	
	112.500	135.000	97.850	1.970			MOUNT		.000	90.000
○	157.500								2.000	.000
□									PHI	
◇										

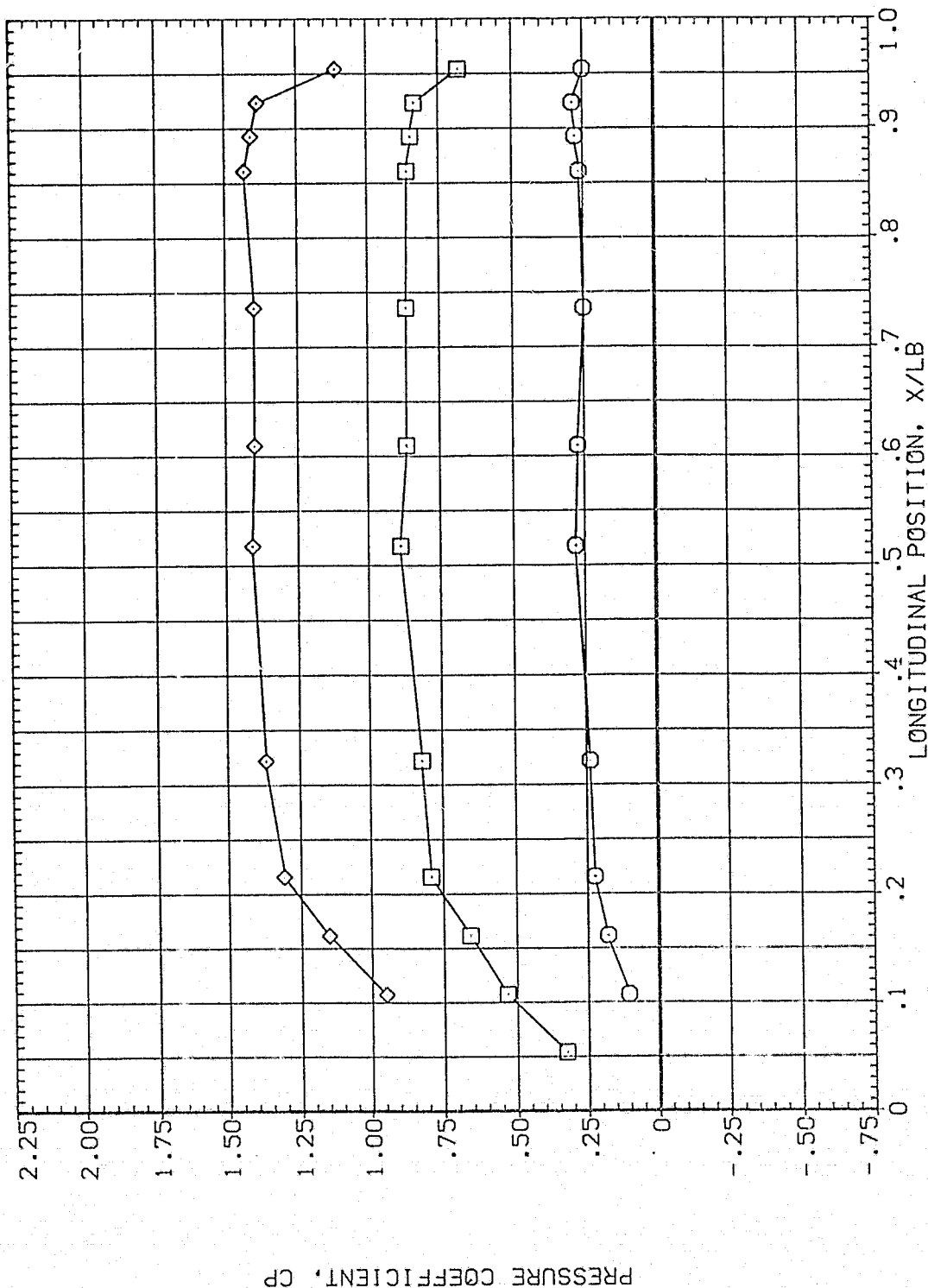


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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SYMBOL

THETA
180.000
202.500
225.000

ALPHA
97.850

MACH
1.970

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
90.000
OFFSET
PHI
.000

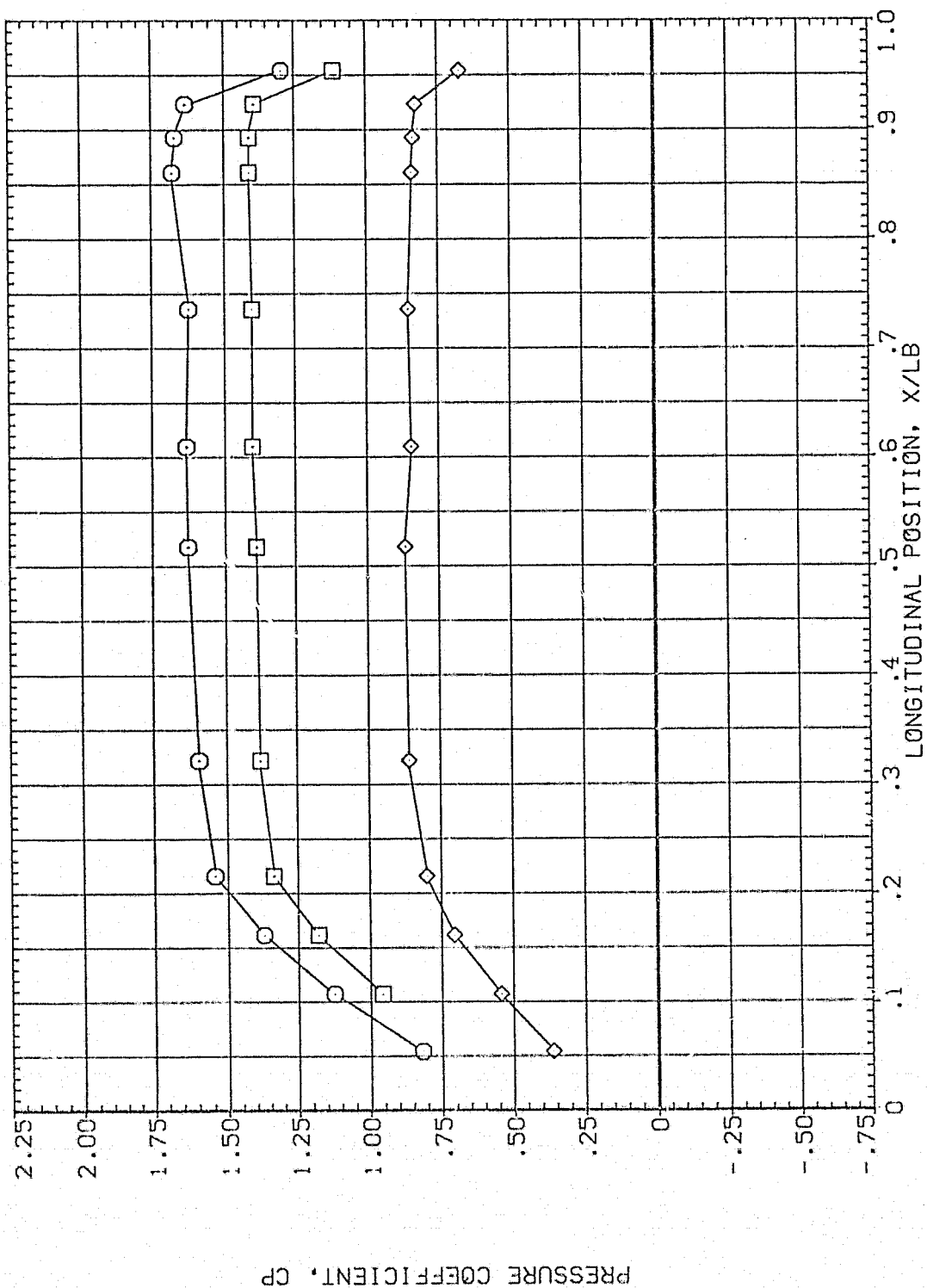


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	97.850	1.970	MOUNT	.000
□	270.000				2.000
◇	292.500				90.000
					PHI
					.000

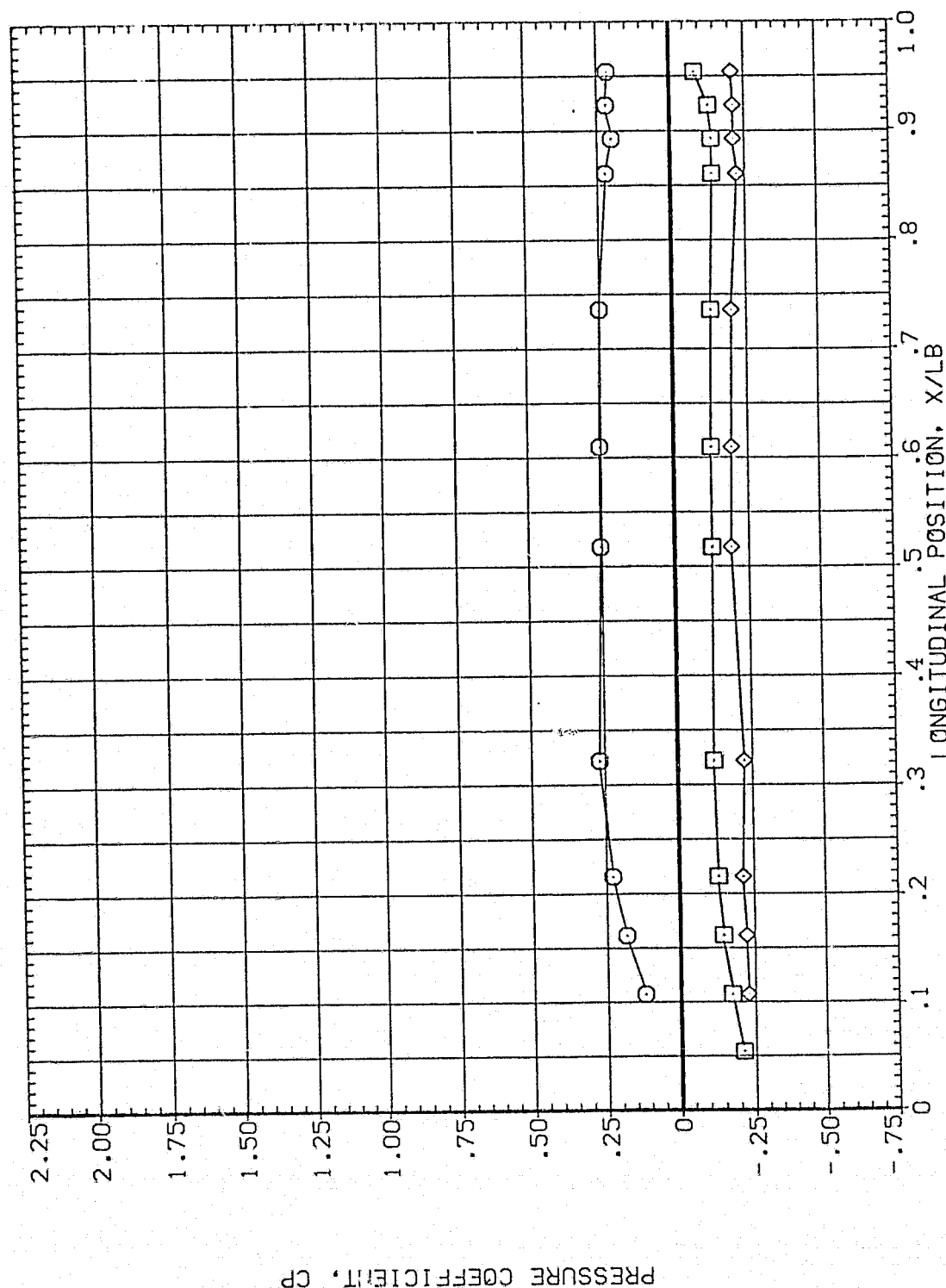


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	97.850	1.970	MOUNT	.000
□	326.000				OFFSET
◇	346.000				PHI
					2.000
					90.000
					.000

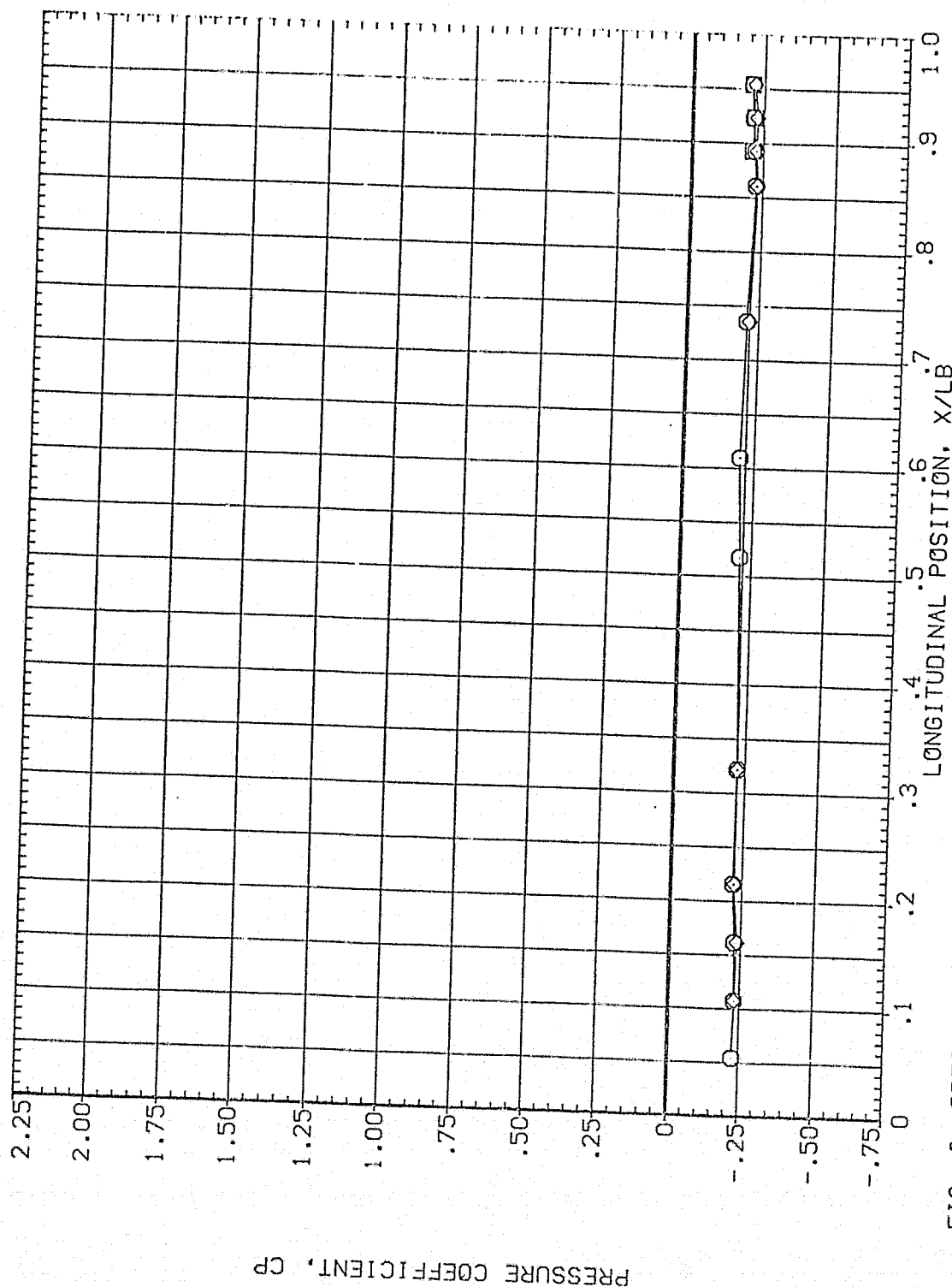


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2.

(P1A080)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.000	99.730	1.960	.000	.000	.000
□	14.000			2.000		
◇	24.000					

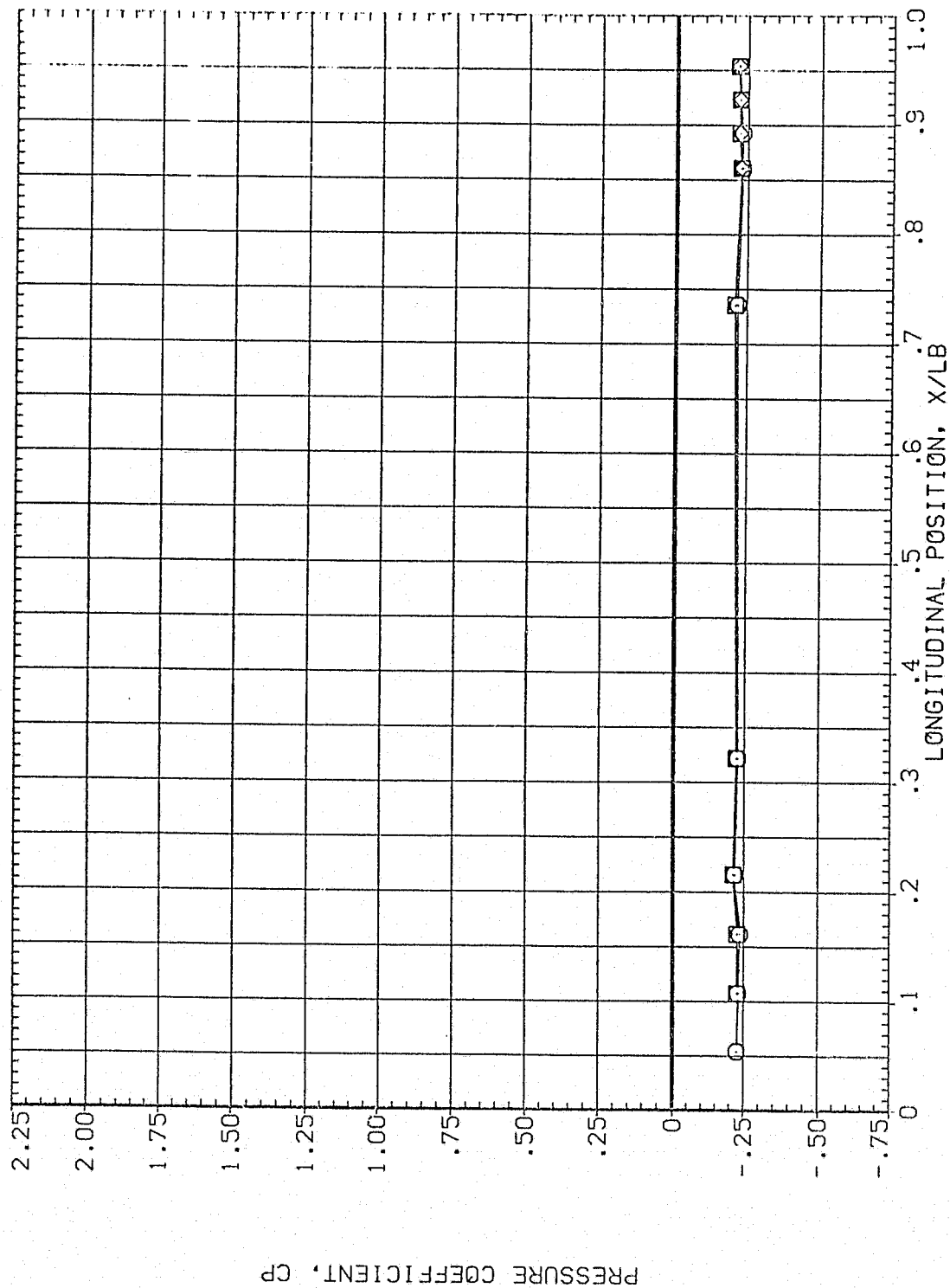


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	99.730	1.960	MOUNT	.000
□	67.500				2.000
◇	90.000				PHI
					90.000
					.000

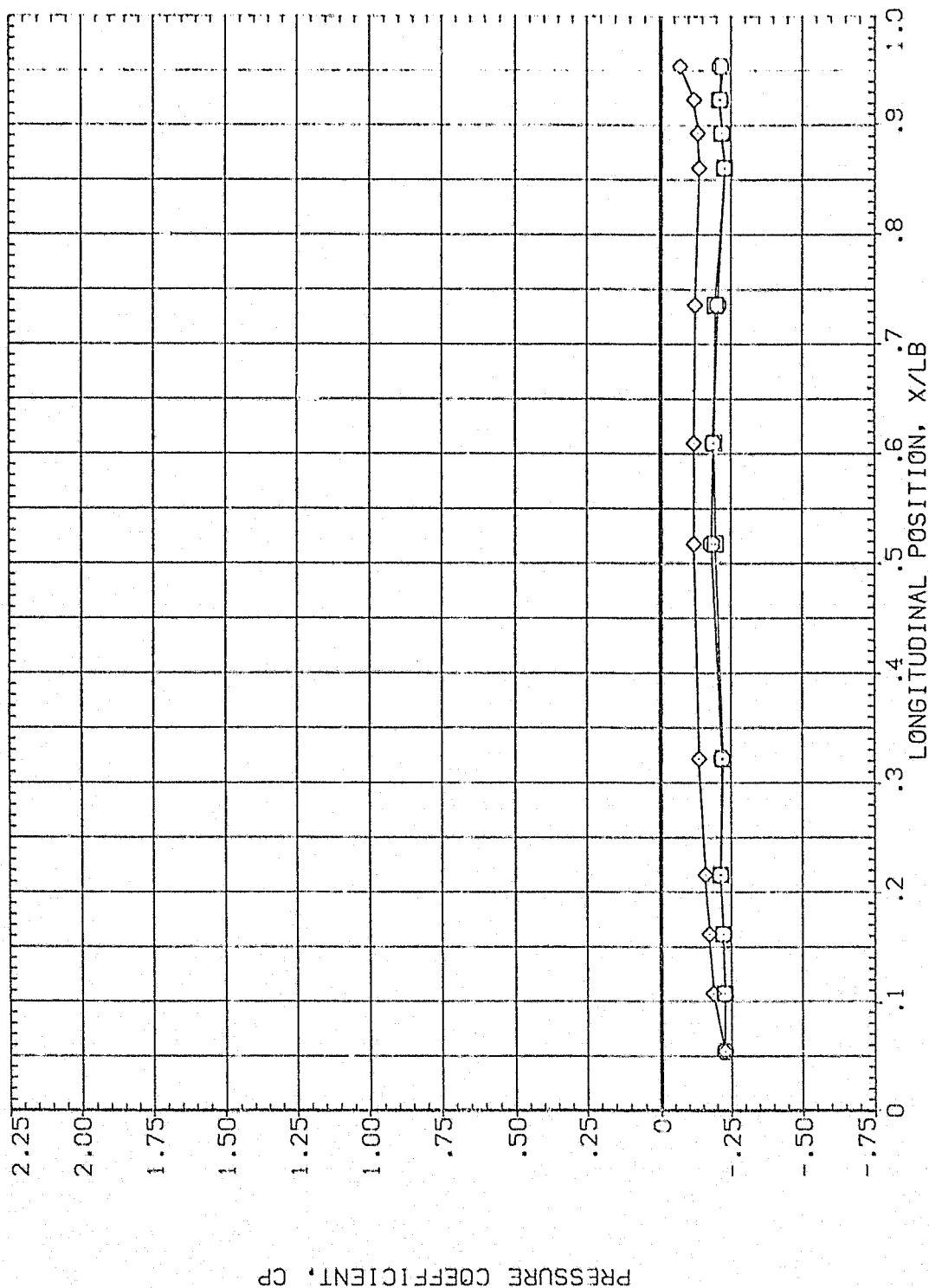


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
◇	112.500	99.730	1.960	MOUNT	.000
□	135.000				2.000
○	157.500				90.000
					PHI
					.000

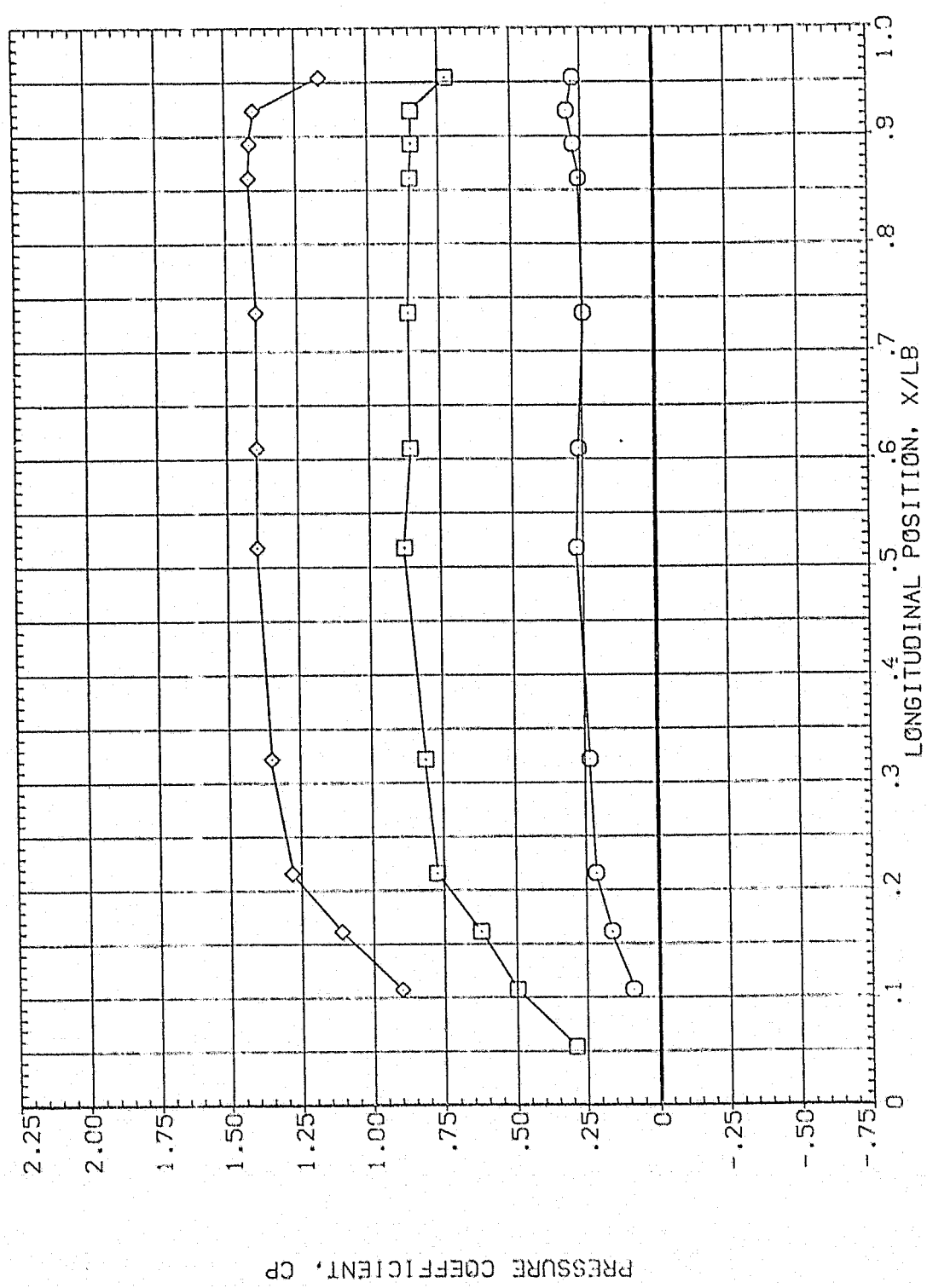


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	99.730	1.960	.000	OFFSET
□	202.500			2.000	PHI
◇	225.000			.000	

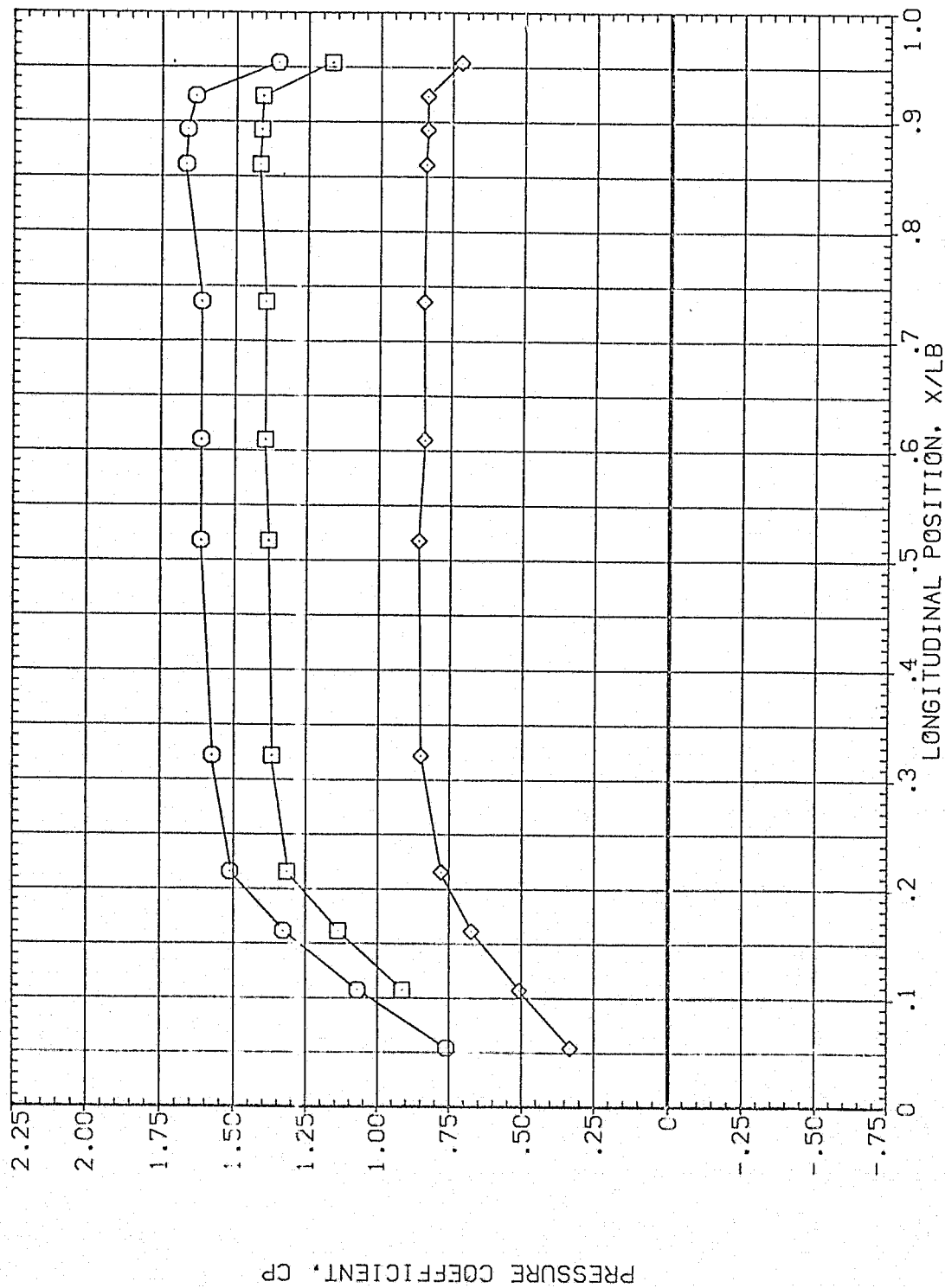


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	247.500	99.730	1.960	2.000	PHI	.000
□	270.000					
◇	292.500					

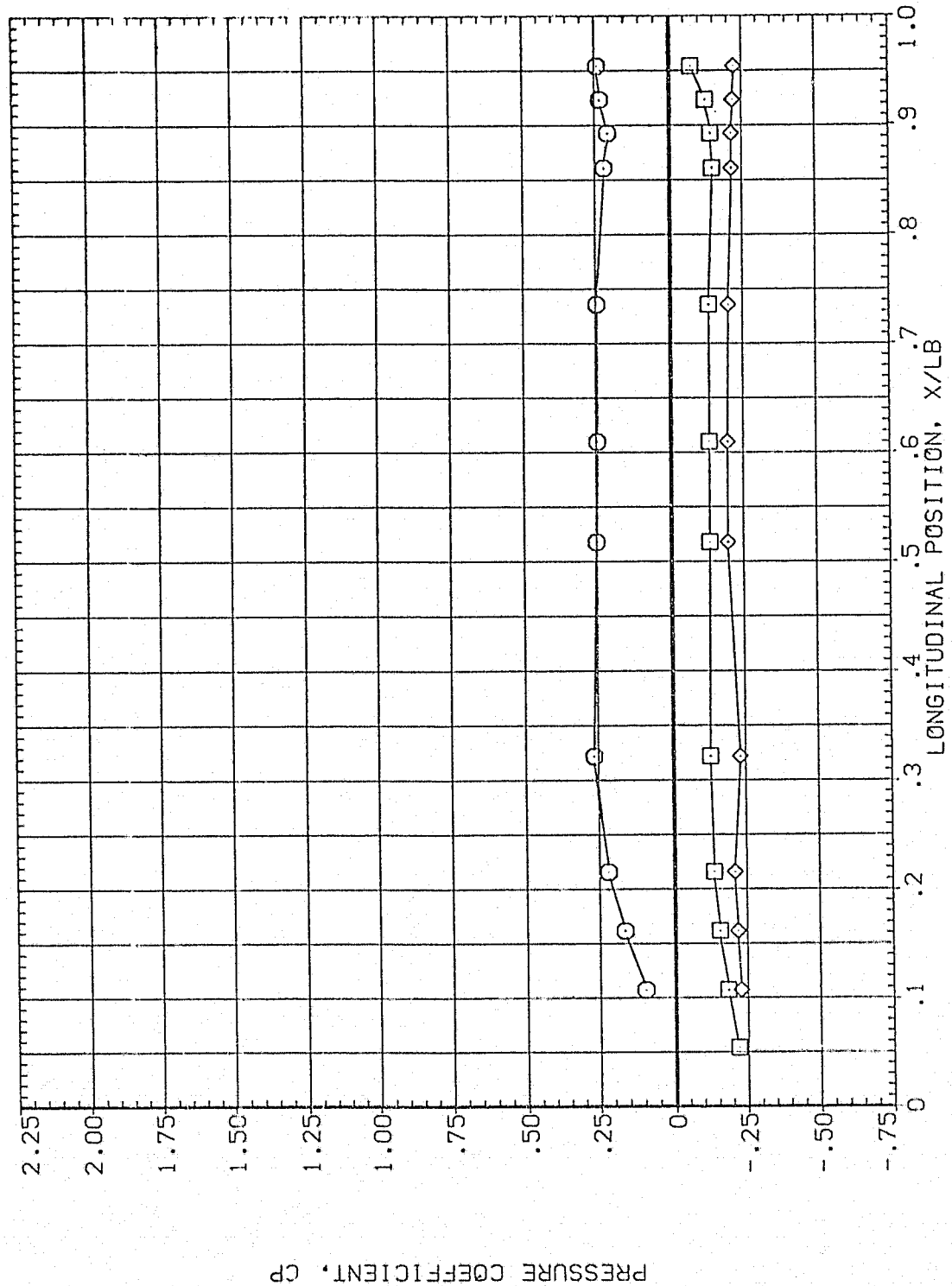


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	315.000	326.000	99.730	1.960	BETA	OFFSET	90.000	PHI	2.000	.000
○					Mount					
□										
◇										

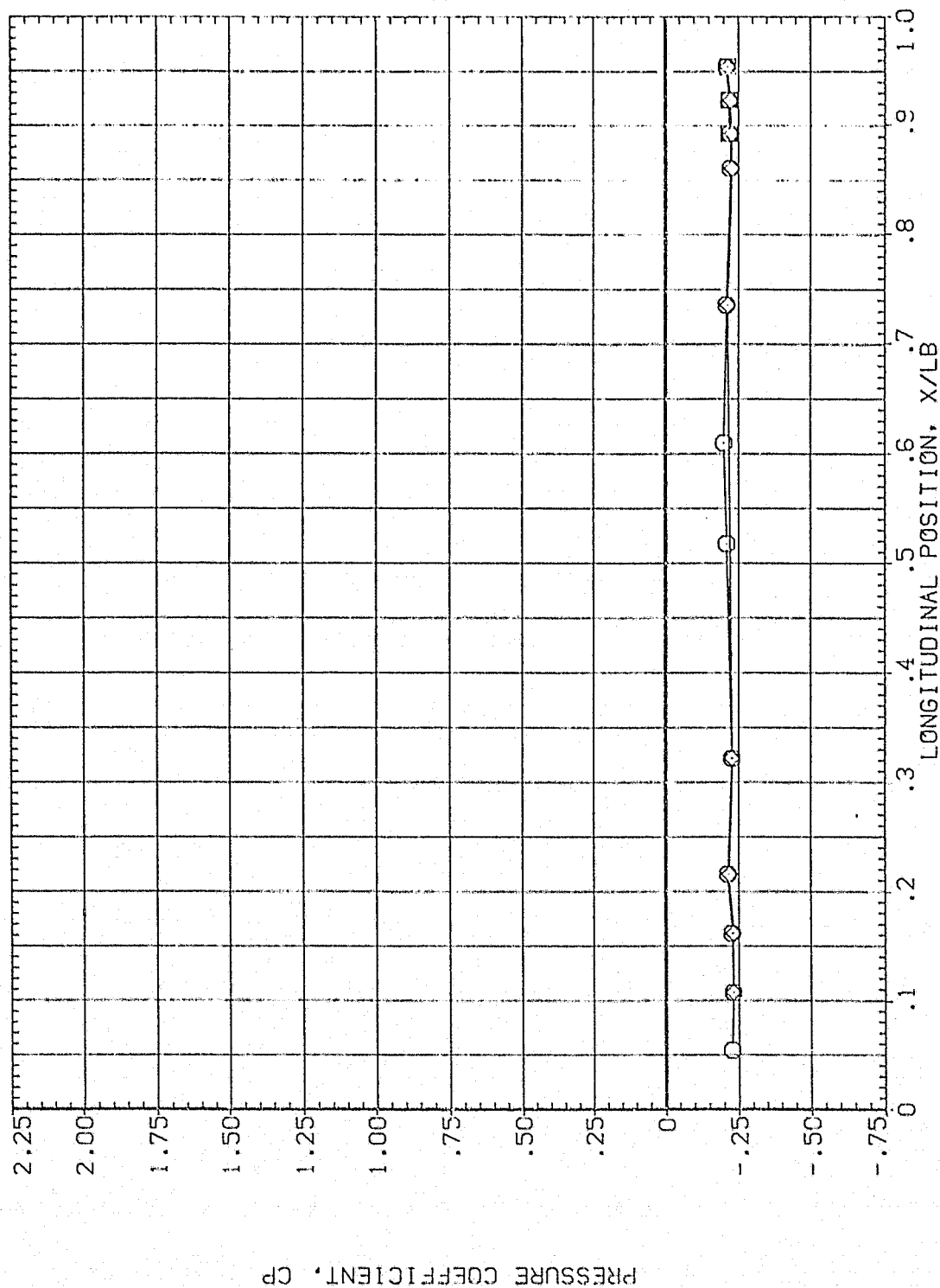


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

PARAMETRIC VALUES
 .000 OFFSET
 2.000 PHI
 60.000

BETA
 MOUNT

MACH
 3.480

ALPHA
 51.000

THETA
 .000
 14.000
 24.000

SYMBOL
 ◊
 ○
 ◊

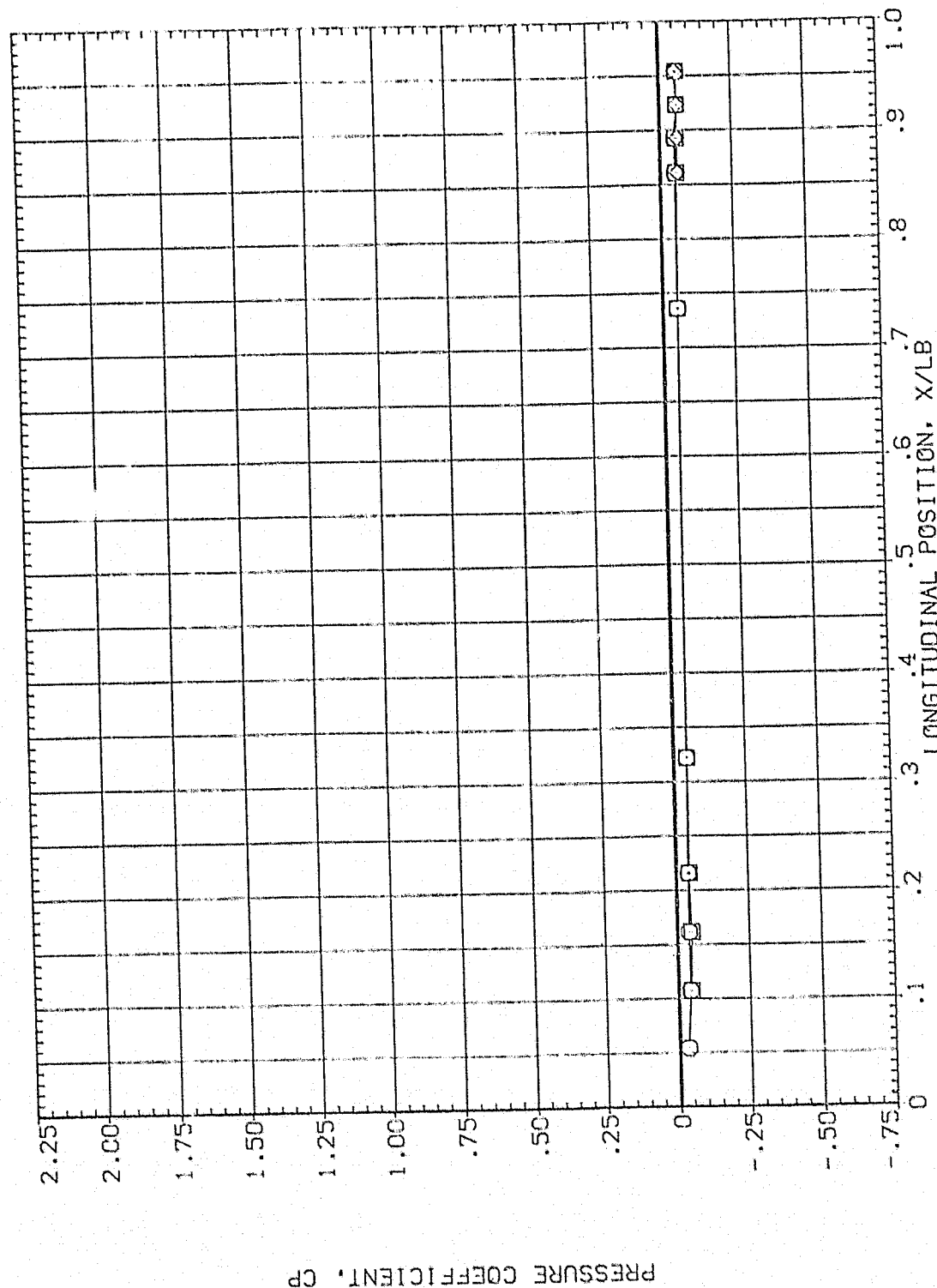


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL THETA ALPHA MACH
 ◇ 45.000 51.000 3.480
 ○ 67.500
 □ 90.000

PARAMETRIC VALUES
 .000 OFFSET 60.000
 2.000 PHI .000

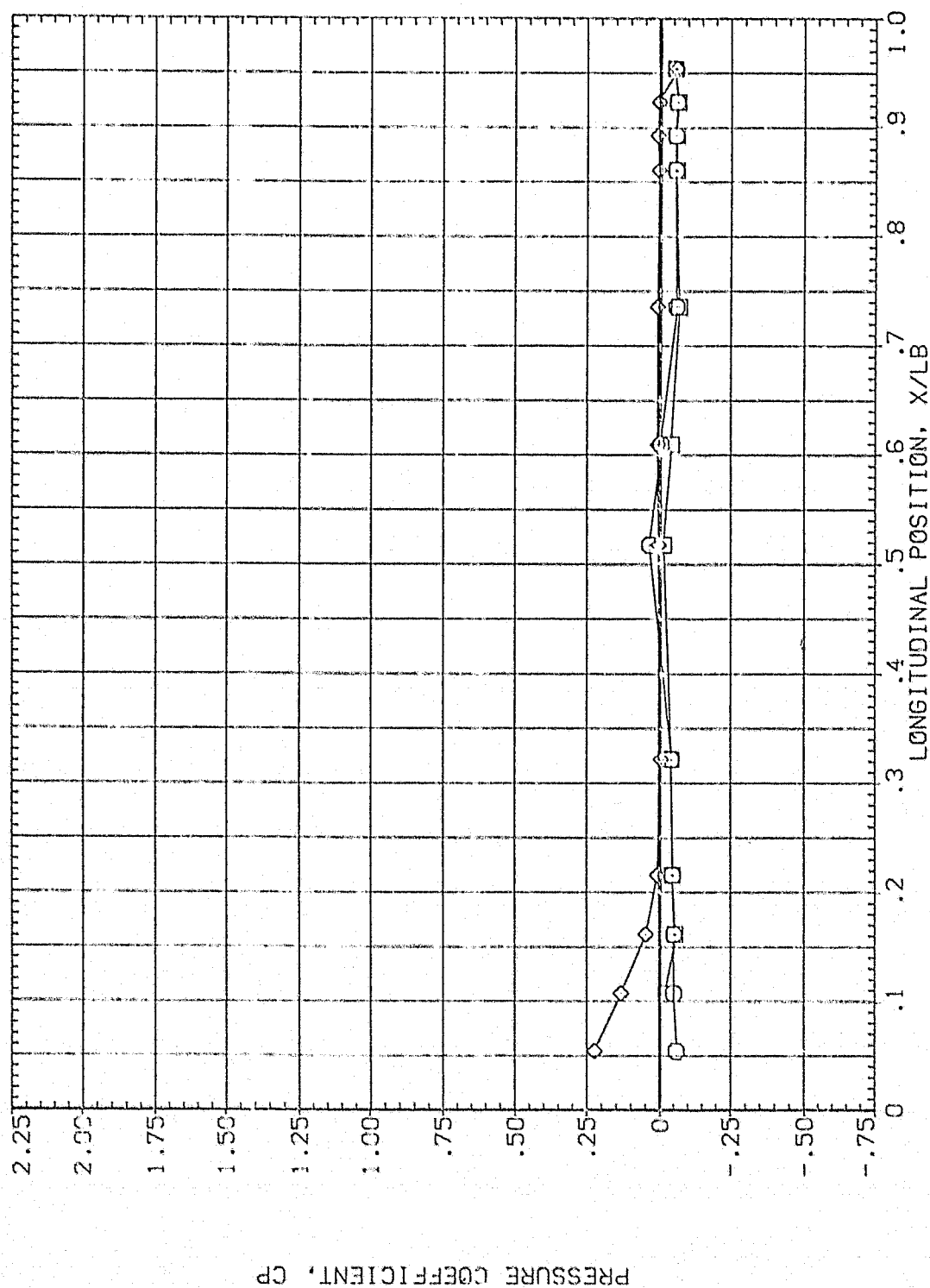


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL
 ○
 □
 ◇

THETA
 112.500
 135.000
 157.500

ALPHA
 51.000

MACH
 3.480

BETA
 MOUNT

PARAMETRIC VALUES
 .000 .000
 2.000 PHI
 60.000
 .000

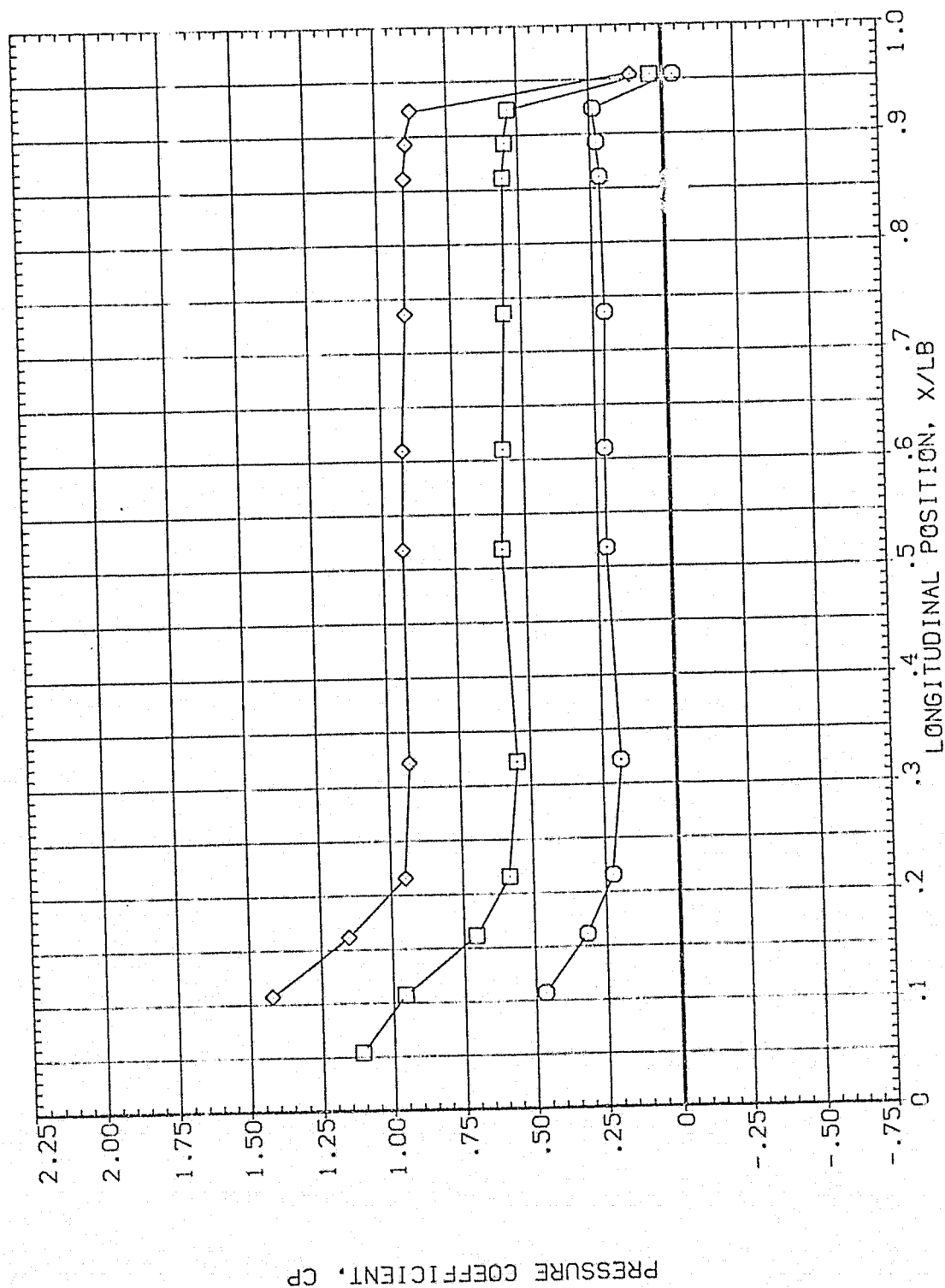


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTRUBERANCES

(P1A0611)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL
○
□
◇

THETA
180.000
202.500
225.000

ALPHA
51.000

MACH
3.480

BETA
MOUNT

PARAMETRIC VALUES
OFFSET
PHI

60.000
2.000
.000

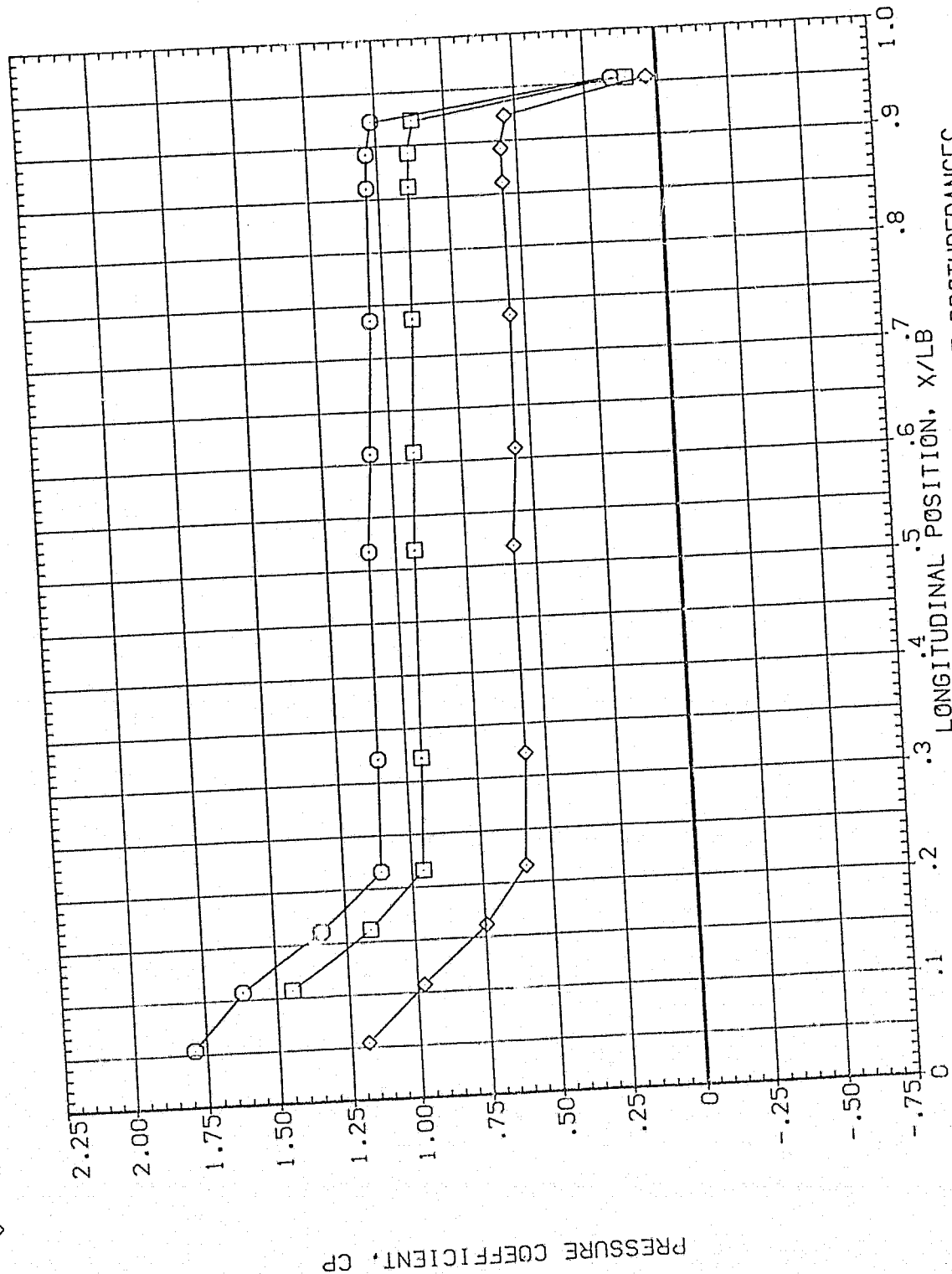


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	51.000	3.480	MOUNT	.000	60.000
□	270.000				2.000	.000
◇	292.500					

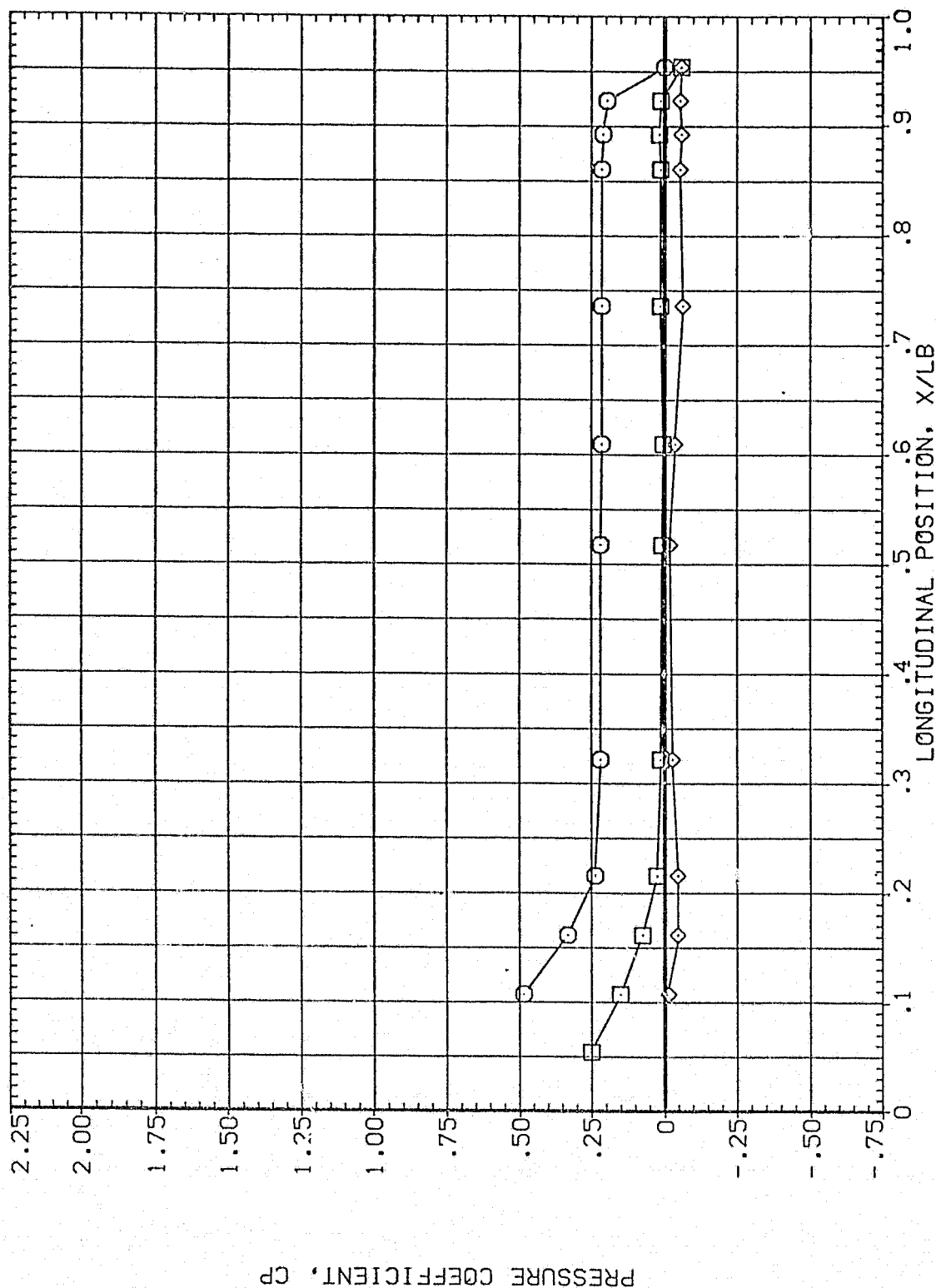


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	51.000	3.480	0.000	OFFSET
□	326.000			2.000	PHI
◇	346.000			60.000	

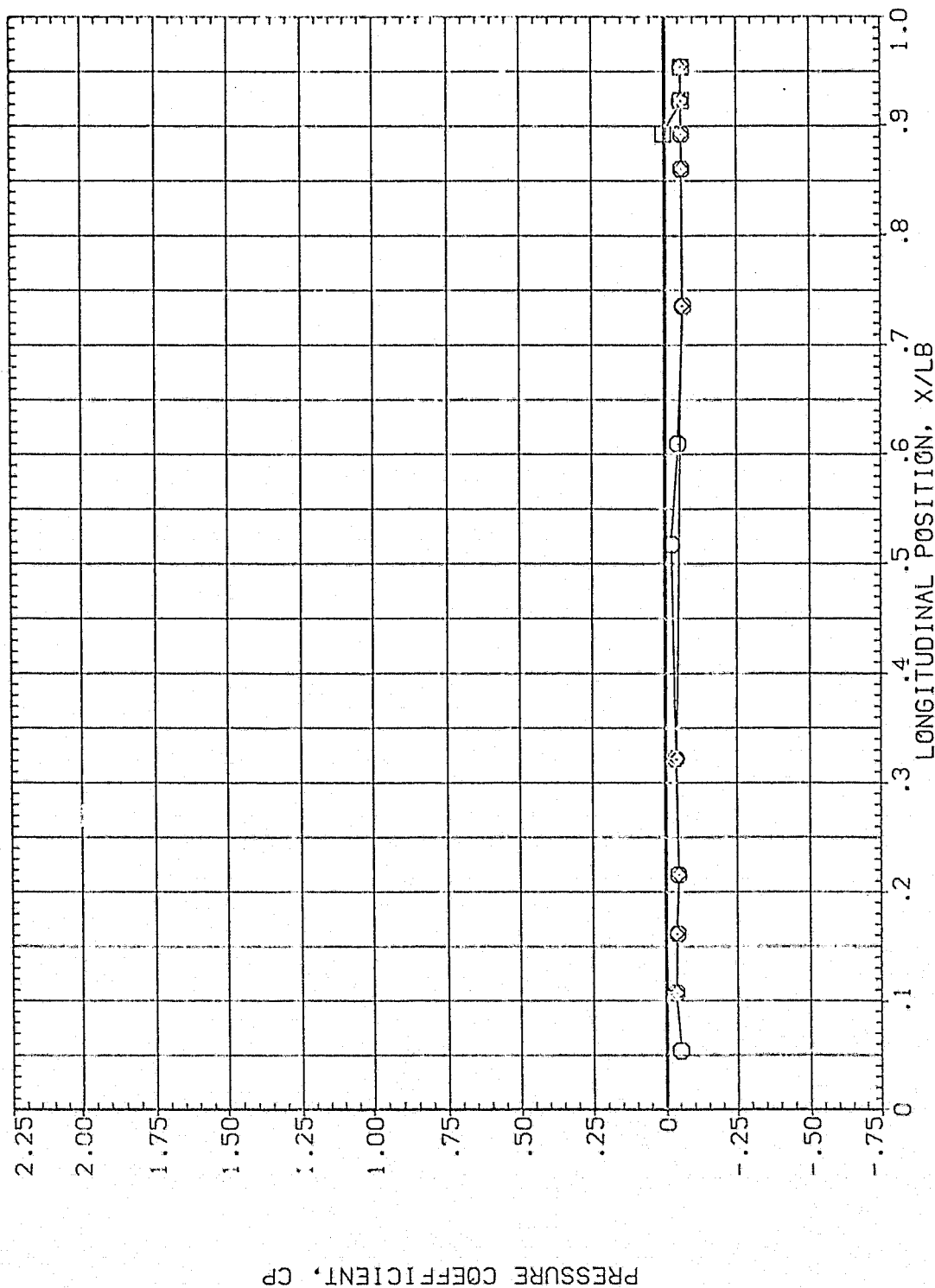


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL
 ()
 ()
 ()
 ()

THETA
 .000
 14.000
 24.000

ALPHA
 54.130

MACH
 3.480

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 .000
 .000
 .000

60.000
 .000

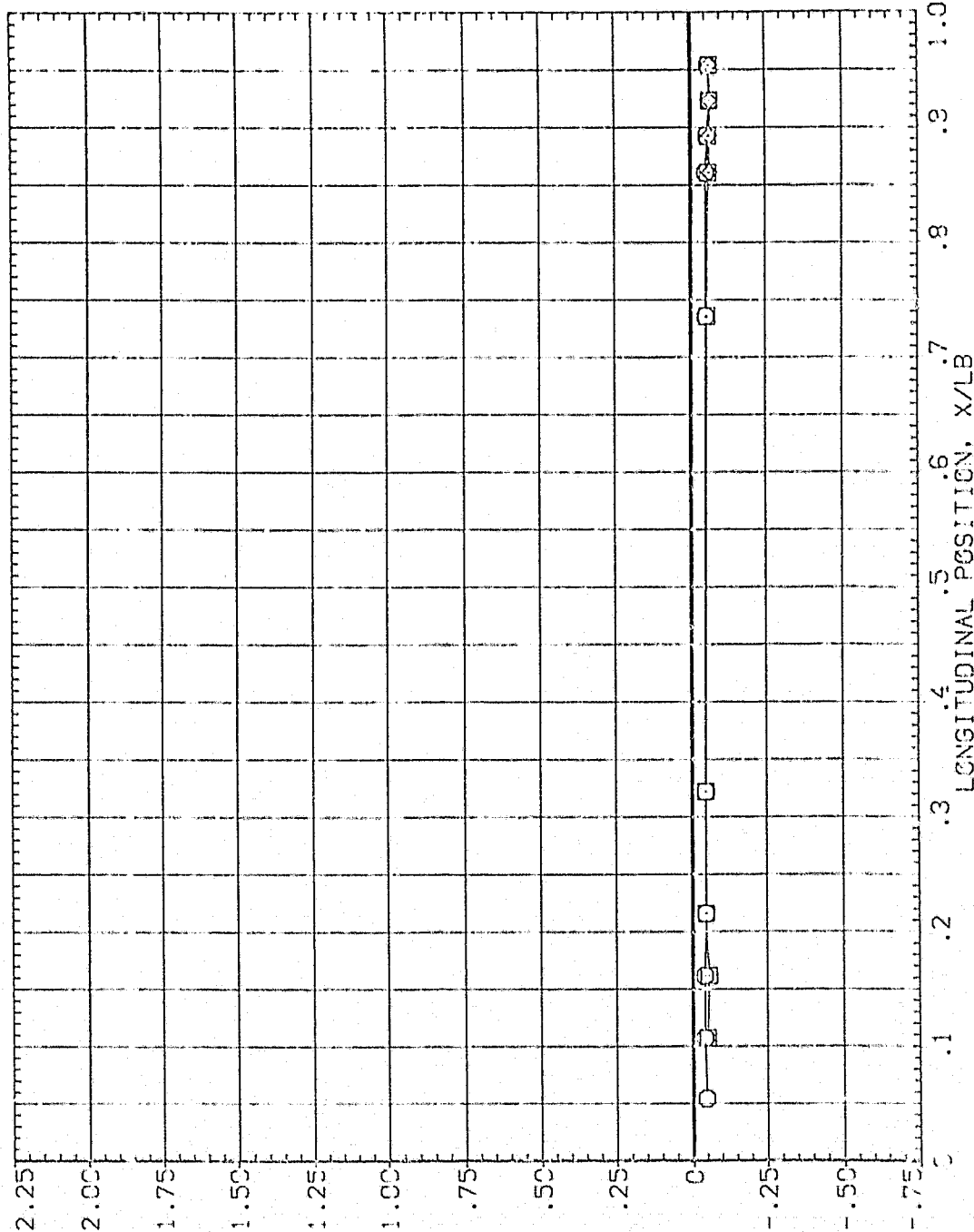


FIG. 2 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
◇	45.000	54.130	3.480	HEIGHT	.000 OFFSET
□	67.500				2.000 PHI
◇	90.000				60.000

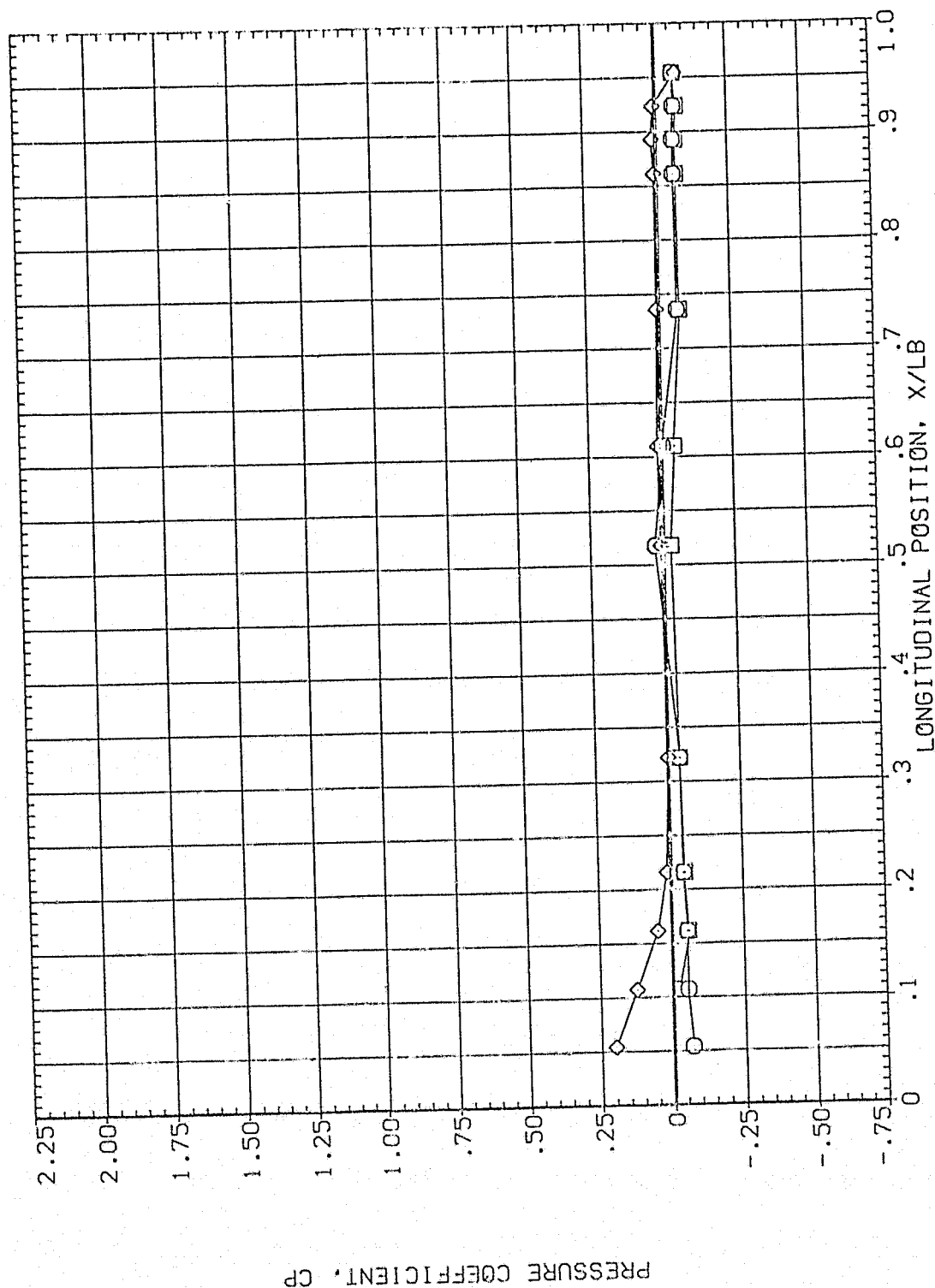


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	.000	50.000
○	112.500	54.130	3.480	MOUNT	2.000	.000
□	135.000					
◇	157.500					

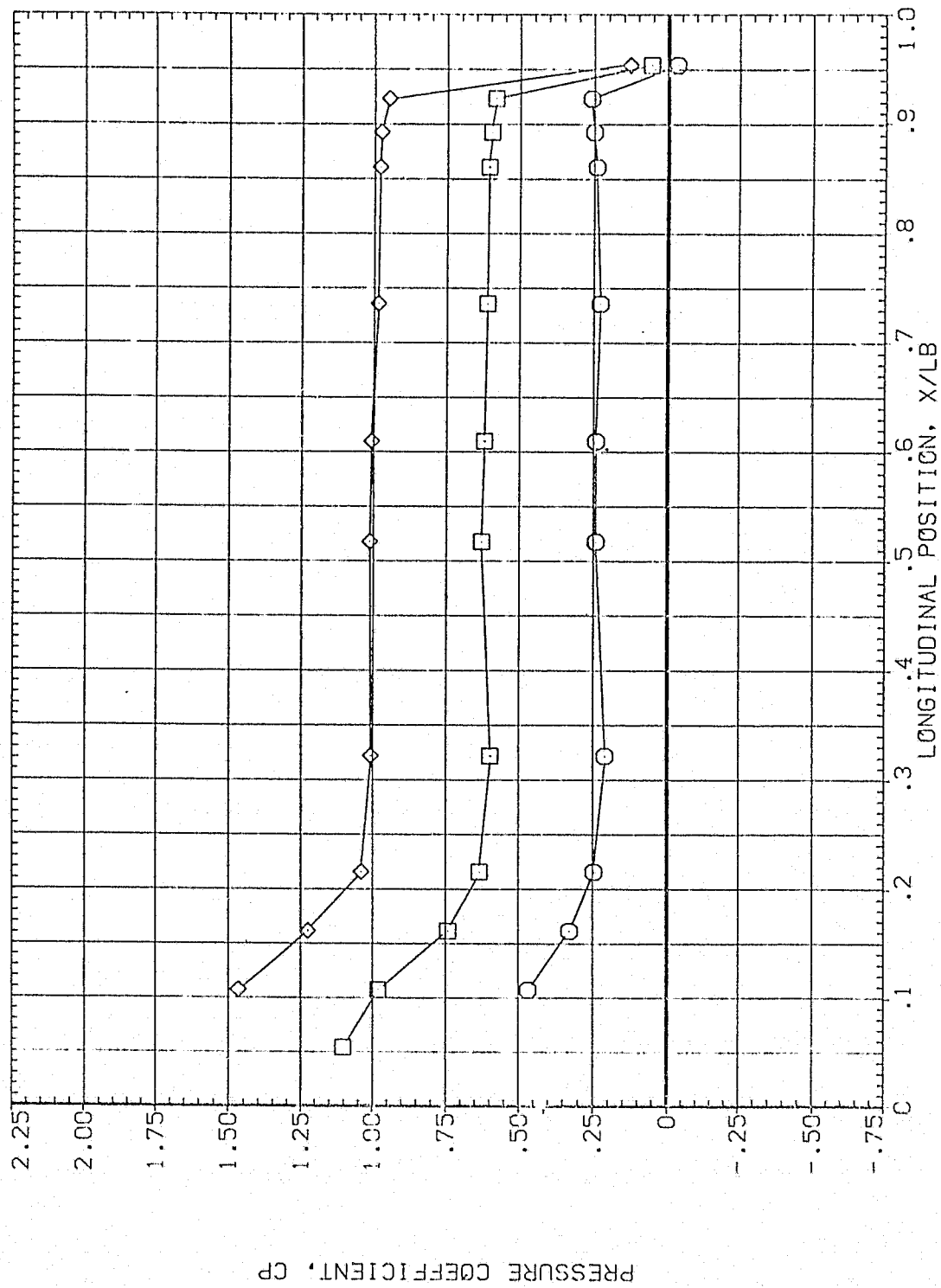


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL THETA ALPHA MACH
 ○ 180.000 54.130 3.480
 □ 202.500
 ◇ 225.000

PARAMETRIC VALUES
 .000 .000 60.000
 BETA OFFSET PHI
 MOUNT 2.000

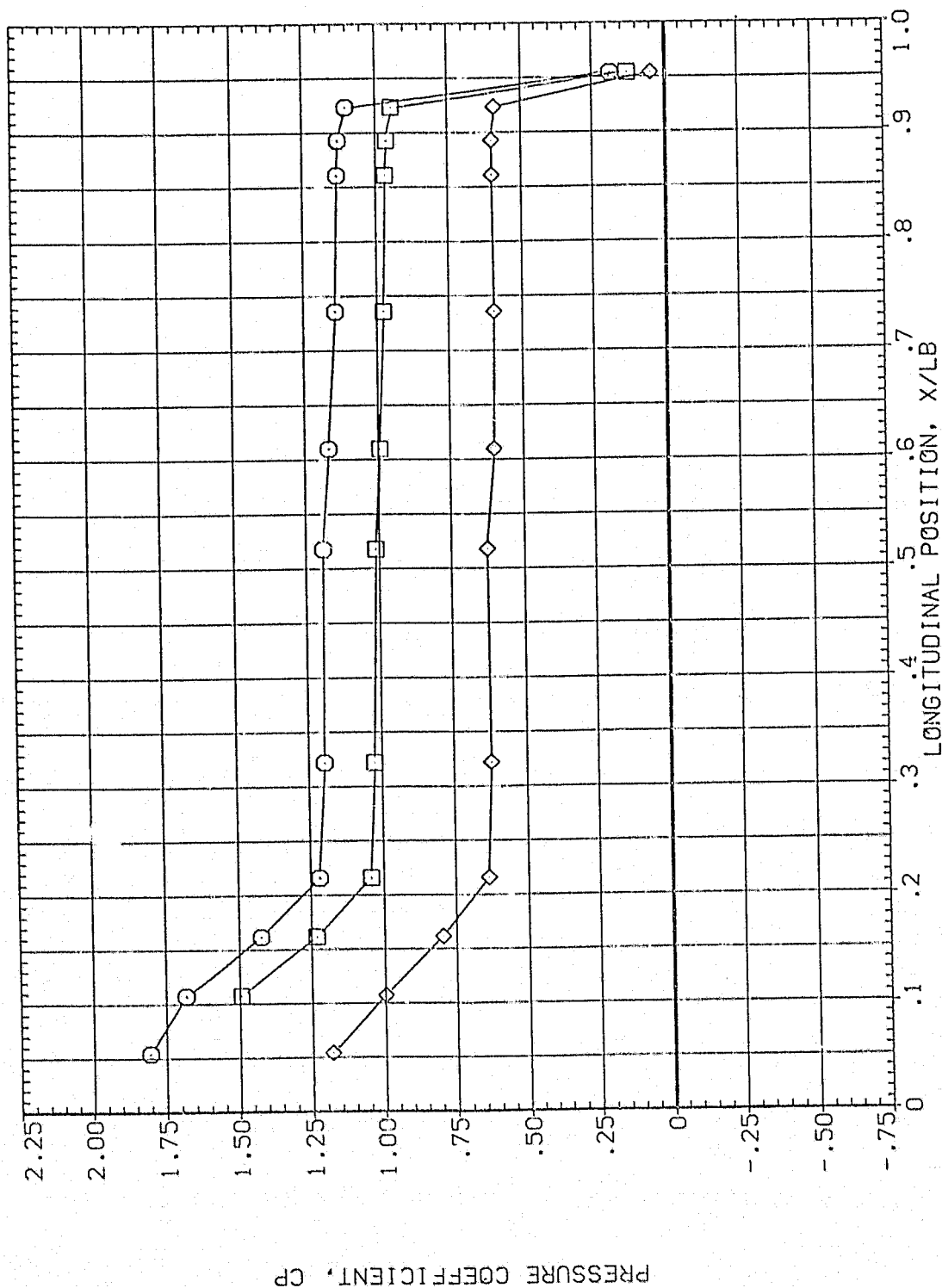


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	54.130	3.480	2.000	.000	60.000
□	270.000					.000
◇	292.500					

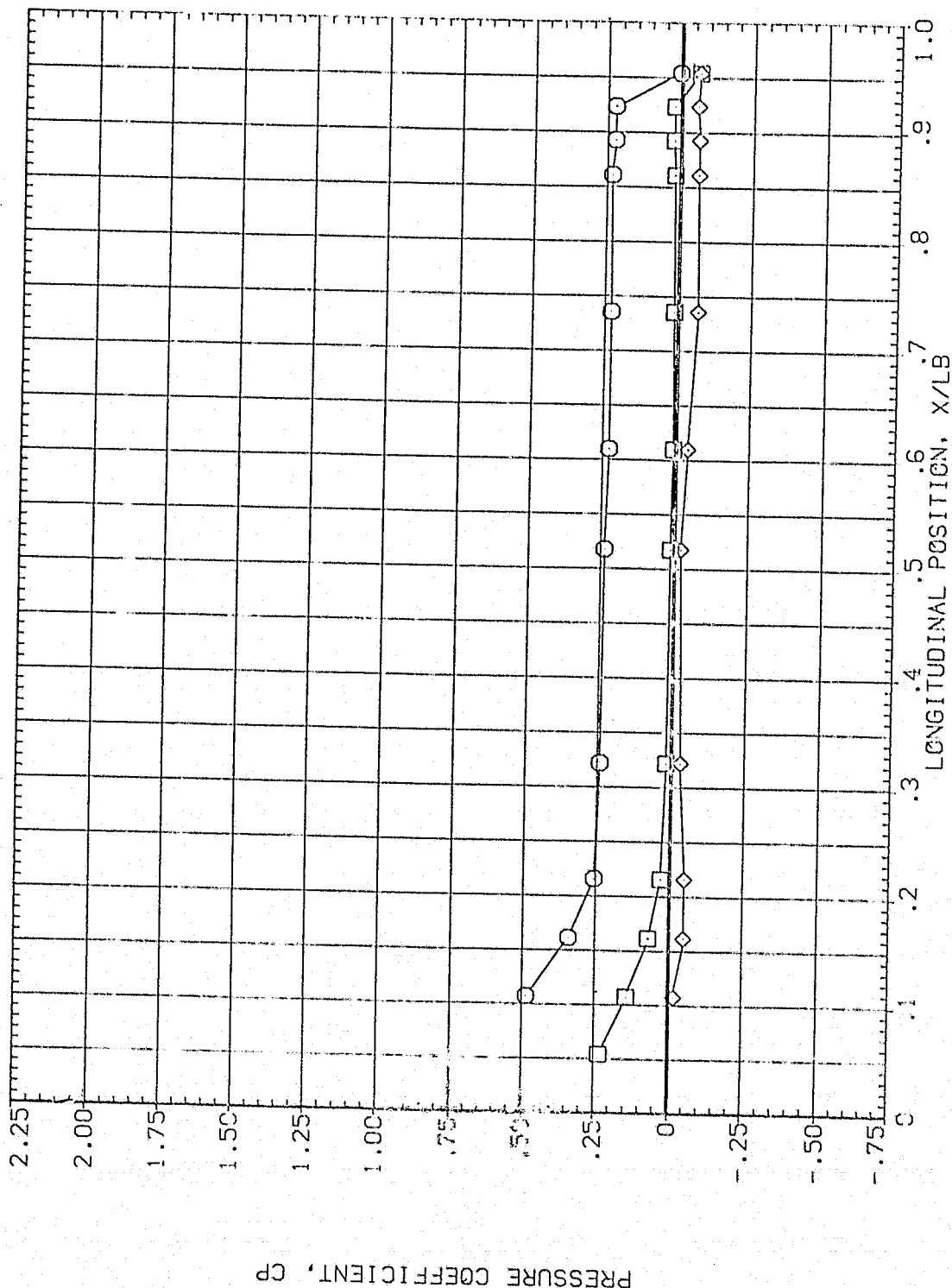


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	315.000	54.130	3.480	.000	2.000	.000
□	326.000					
◇	346.000					

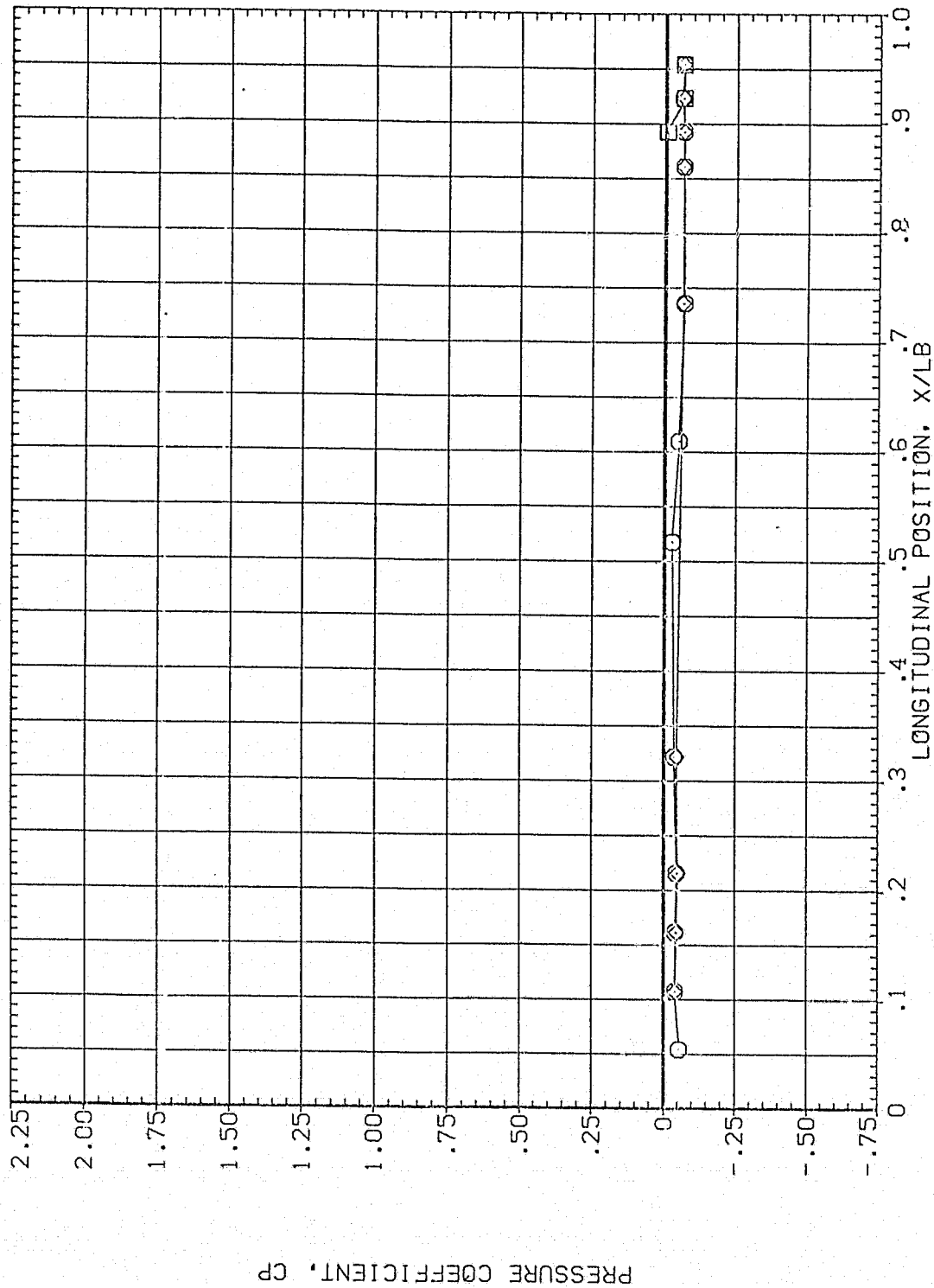


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.000	57.130	3.480	MOUNT	.000	60.000
□	14.000				2.000	
◇	24.000					.000

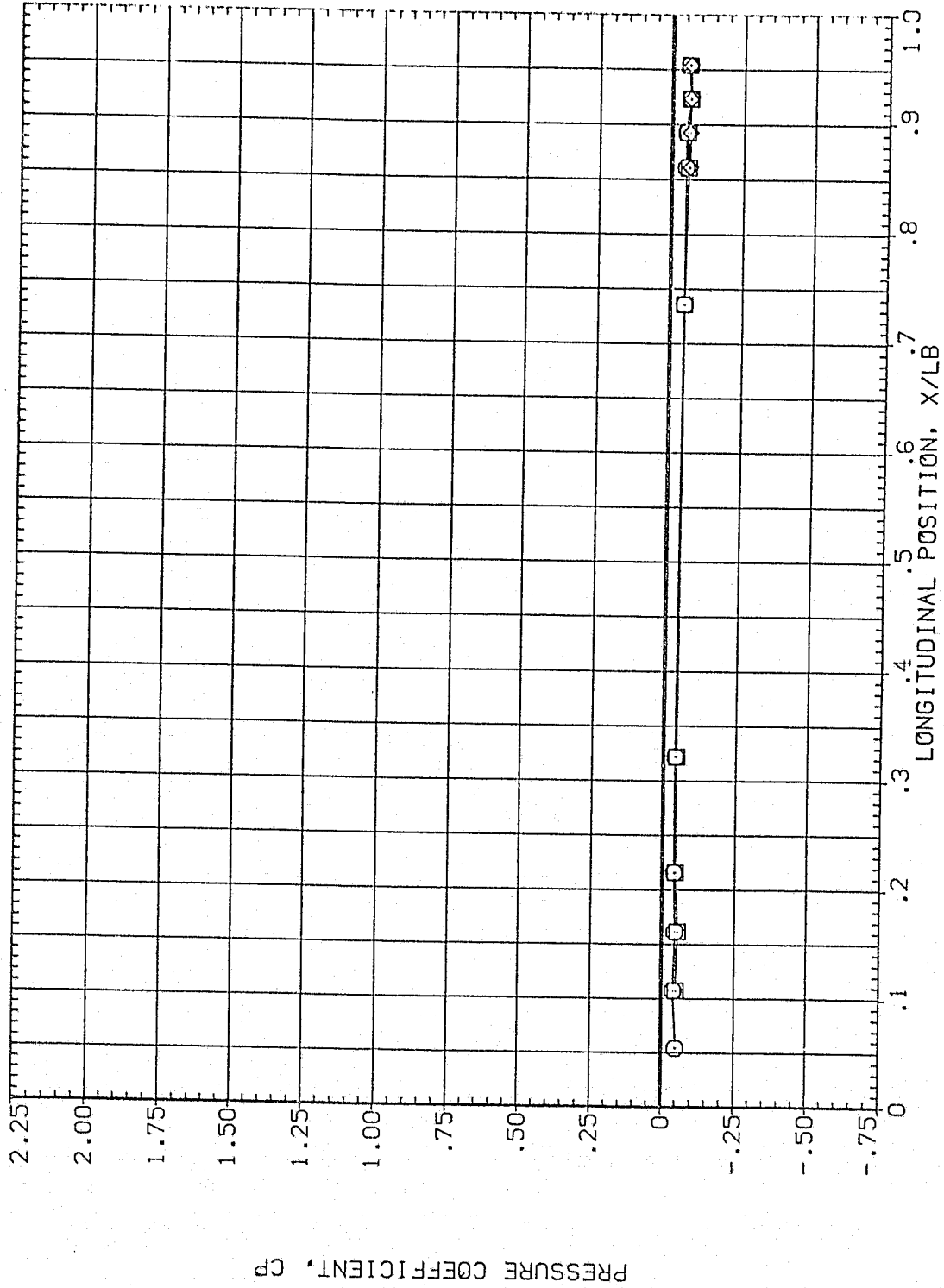


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL
 □
 ◇

THETA
 45.000
 67.500
 90.000

ALPHA
 57.130

MACH
 3.480

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 .000
 .000
 .000

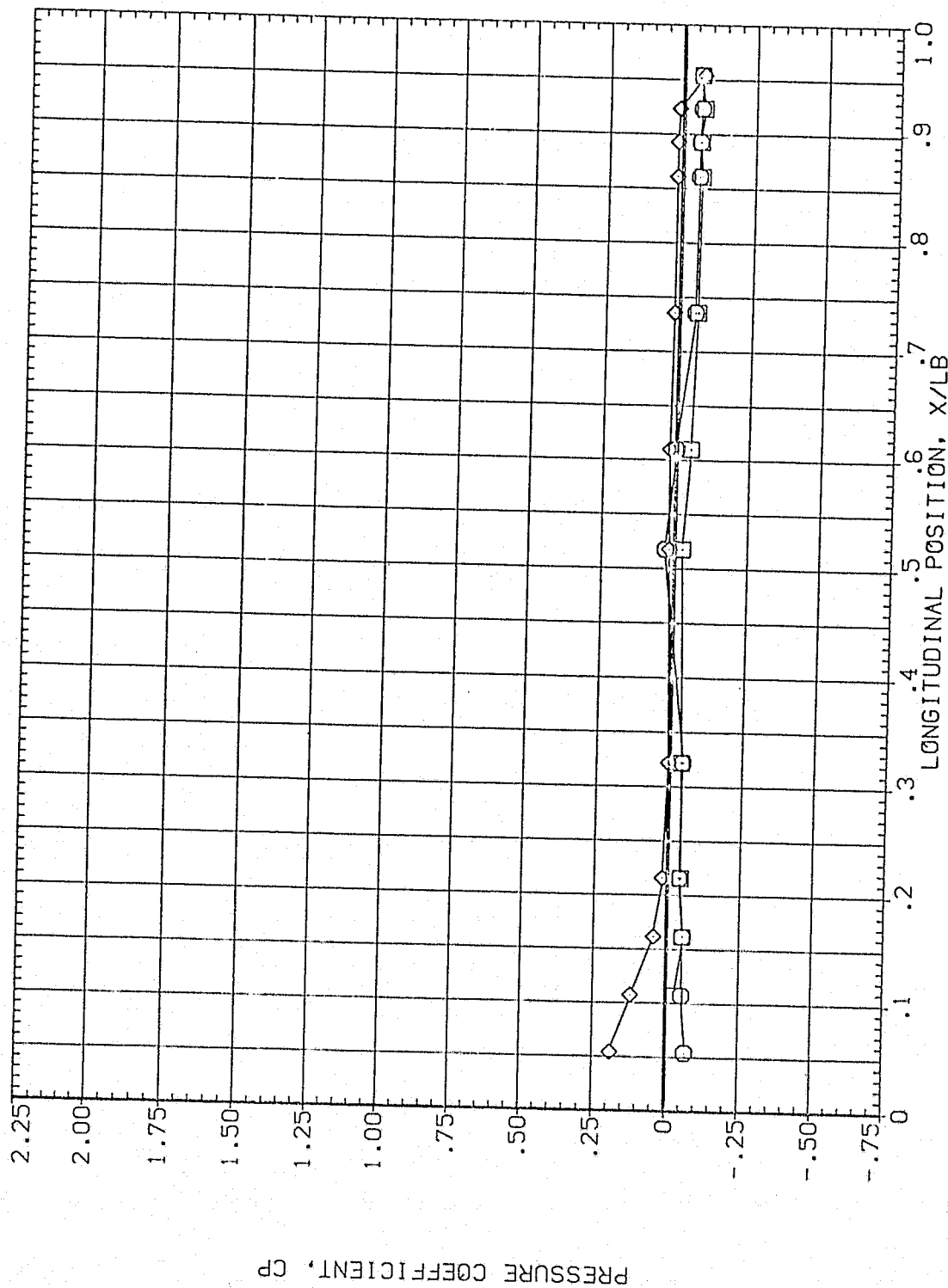


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	112.500	57.130	3.480	MOUNT	.000 OFFSET
□	135.000				2.000 PHI
◇	157.500				60.000

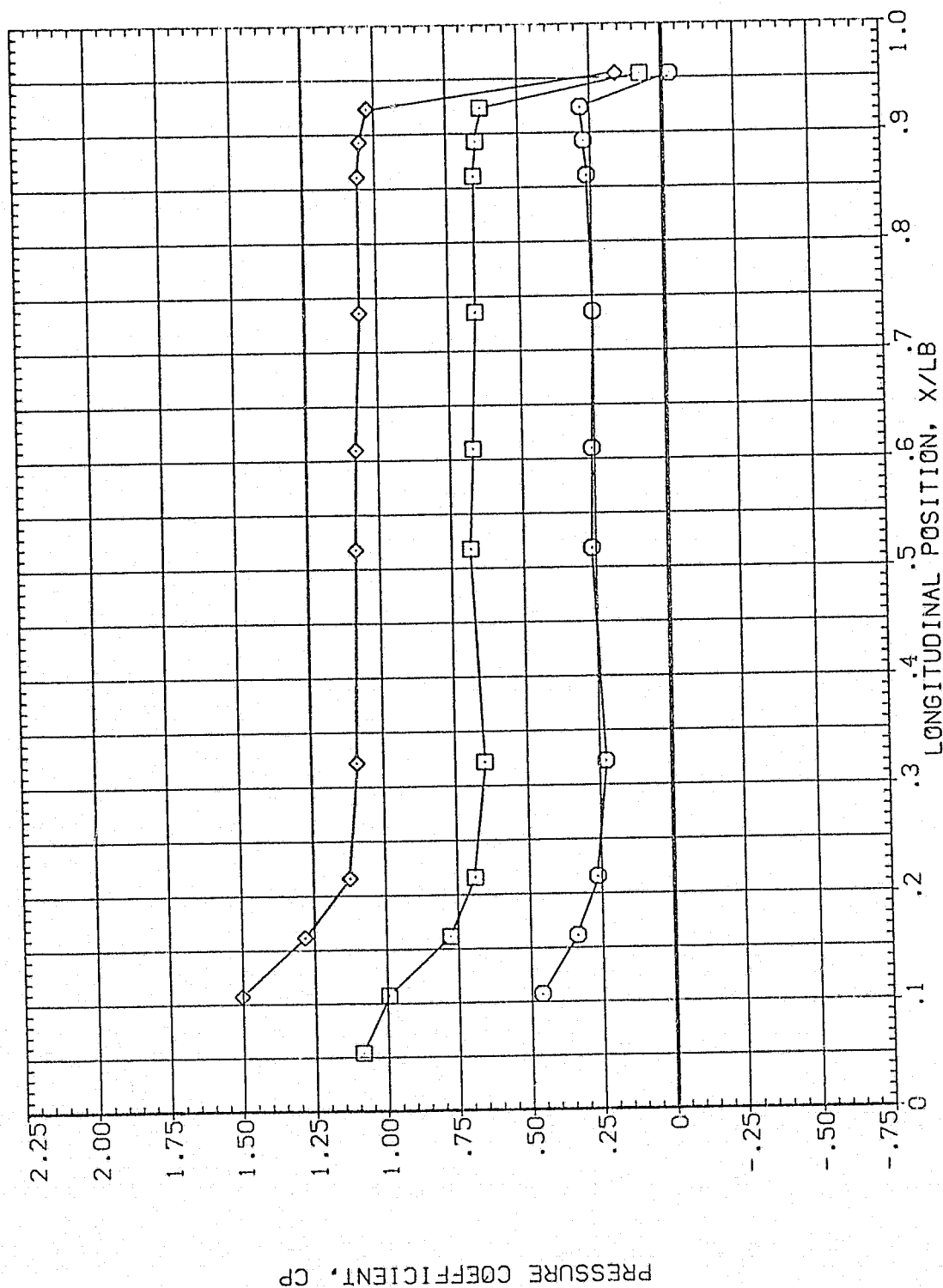


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	.000	PHI
○	180.000	57.130	3.480	MOUNT	2.000	60.000
□	202.500					.000
◇	225.000					

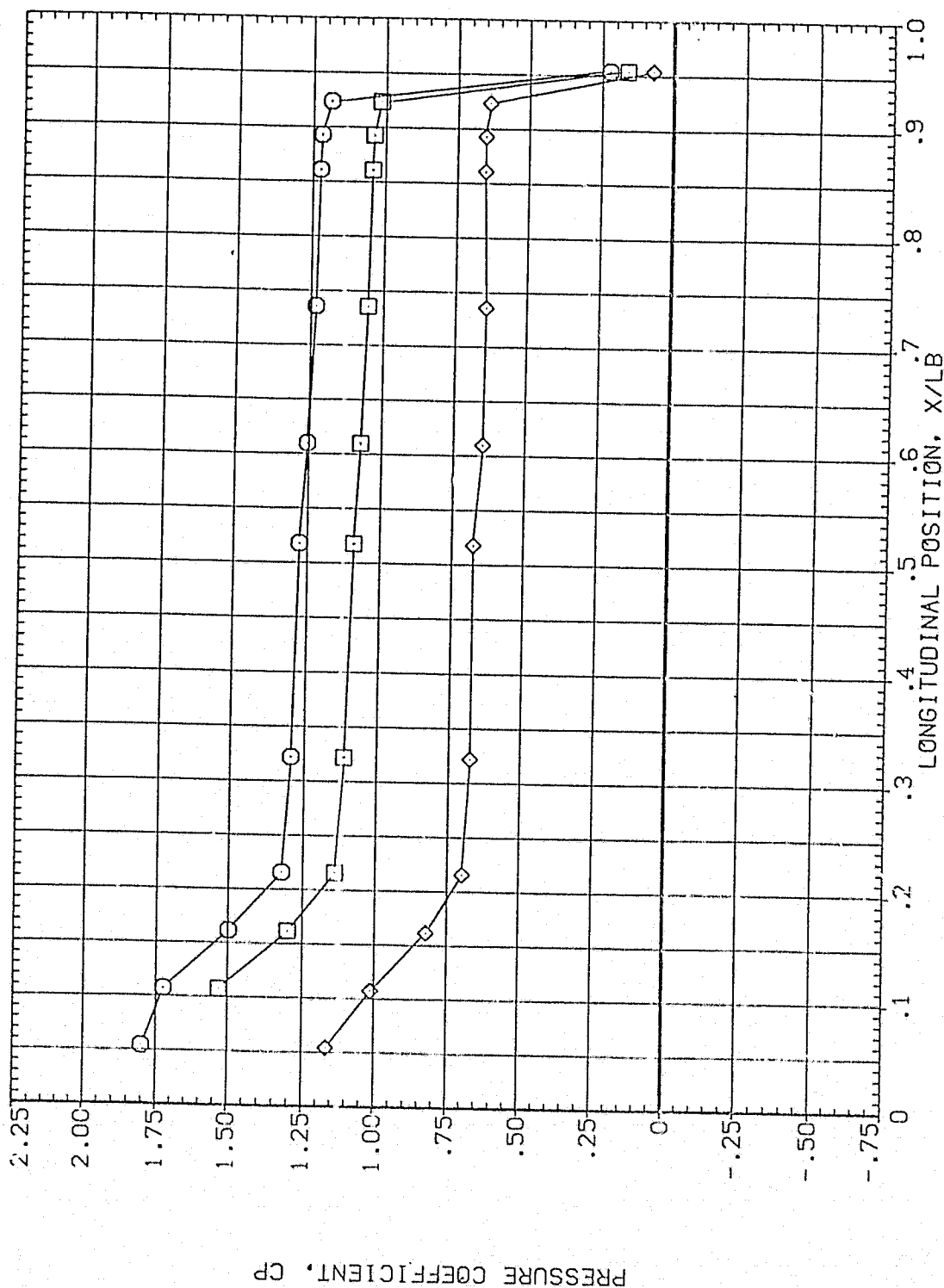


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
PHI 60.000
OFFSET .000

SYMBOL THETA ALPHA MACH
○ 247.500 57.130 3.480
□ 270.000
◇ 292.500

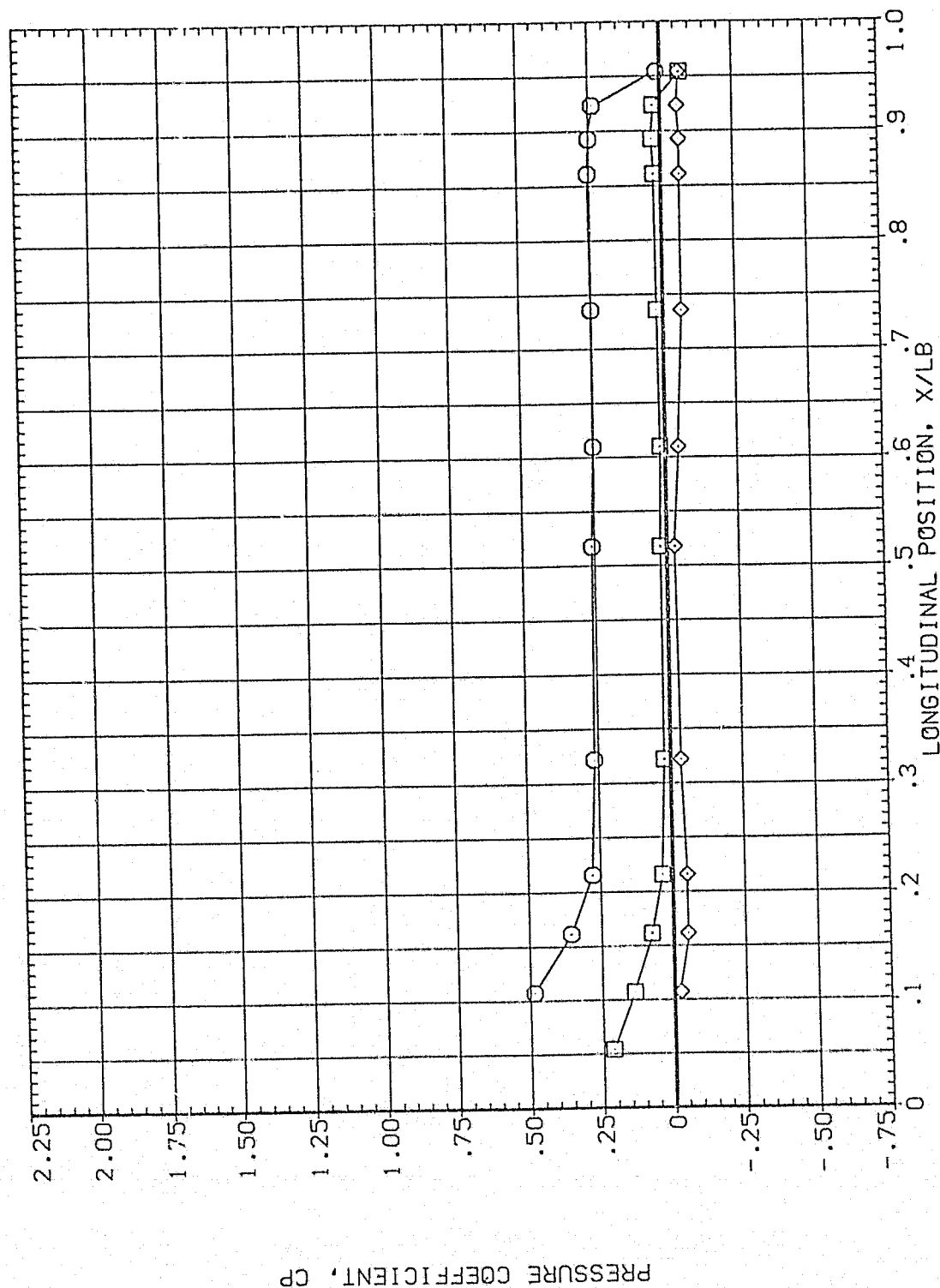


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

(P1A063)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL
○
□
◇

THETA 315.000
ALPHA 57.130
MACH 3.480

PARAMETRIC VALUES
C_D 2.000
C_L 60.000
C_M 2.000
PHI .000

BETA
MOUNT

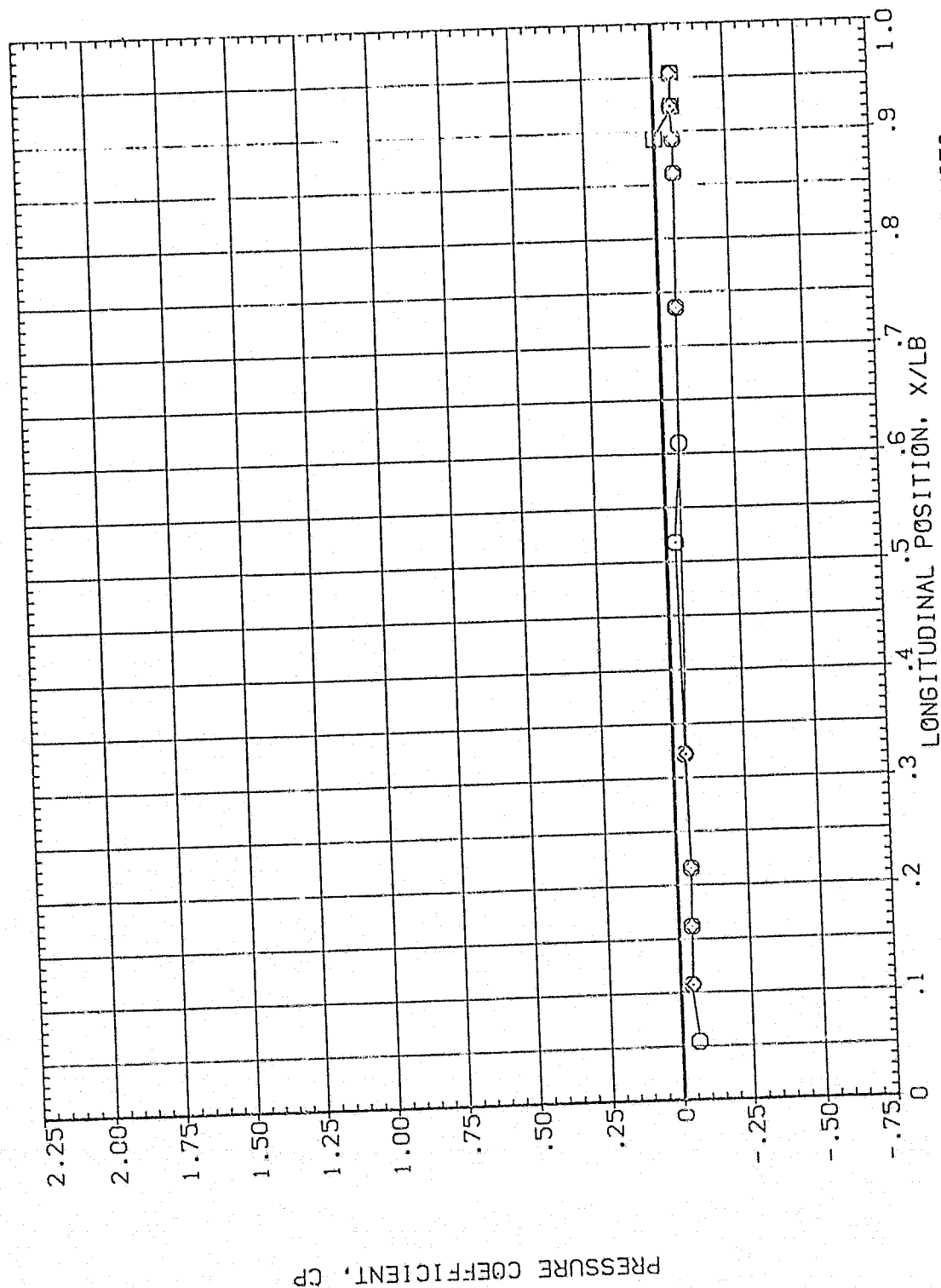


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTRUSANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.000	60.130	3.480	MOUNT	.000
□	14.000				OFFSET
◇	24.000				PHI
					60.000
					.000

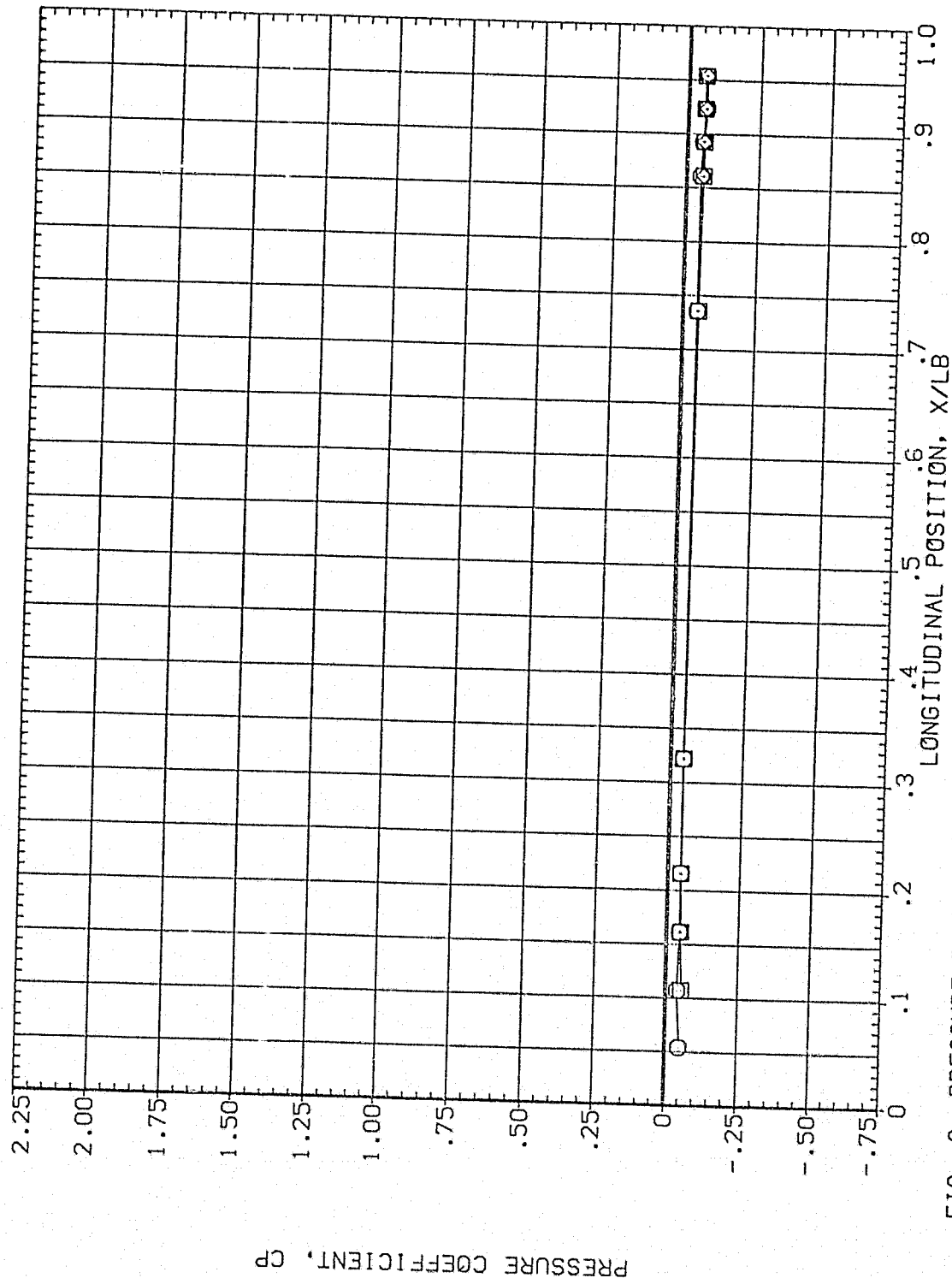


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
 ◇
 □
 ○

THETA 45.000
 67.500
 90.000

ALPHA 60.130

MACH 3.480

PARAMETRIC VALUES
 .000
 .000
 .000

BETA .000
 COUNT 2.000
 PHI 60.000

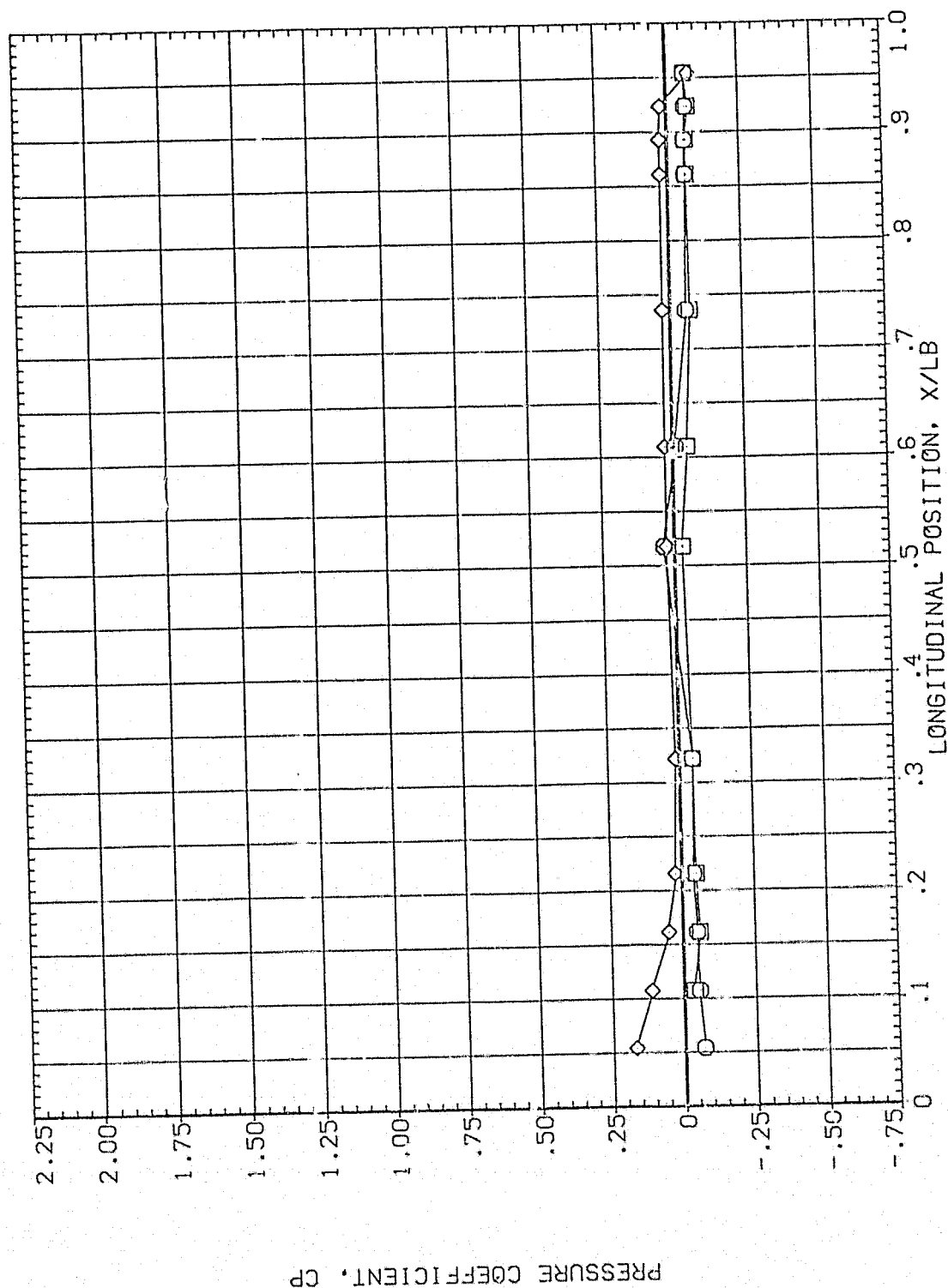


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL

○
□
◇

THETA
112.500
135.000
157.500

ALPHA
60.130

MACH
3.480

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
OFFSET
PHI
60.000
.000

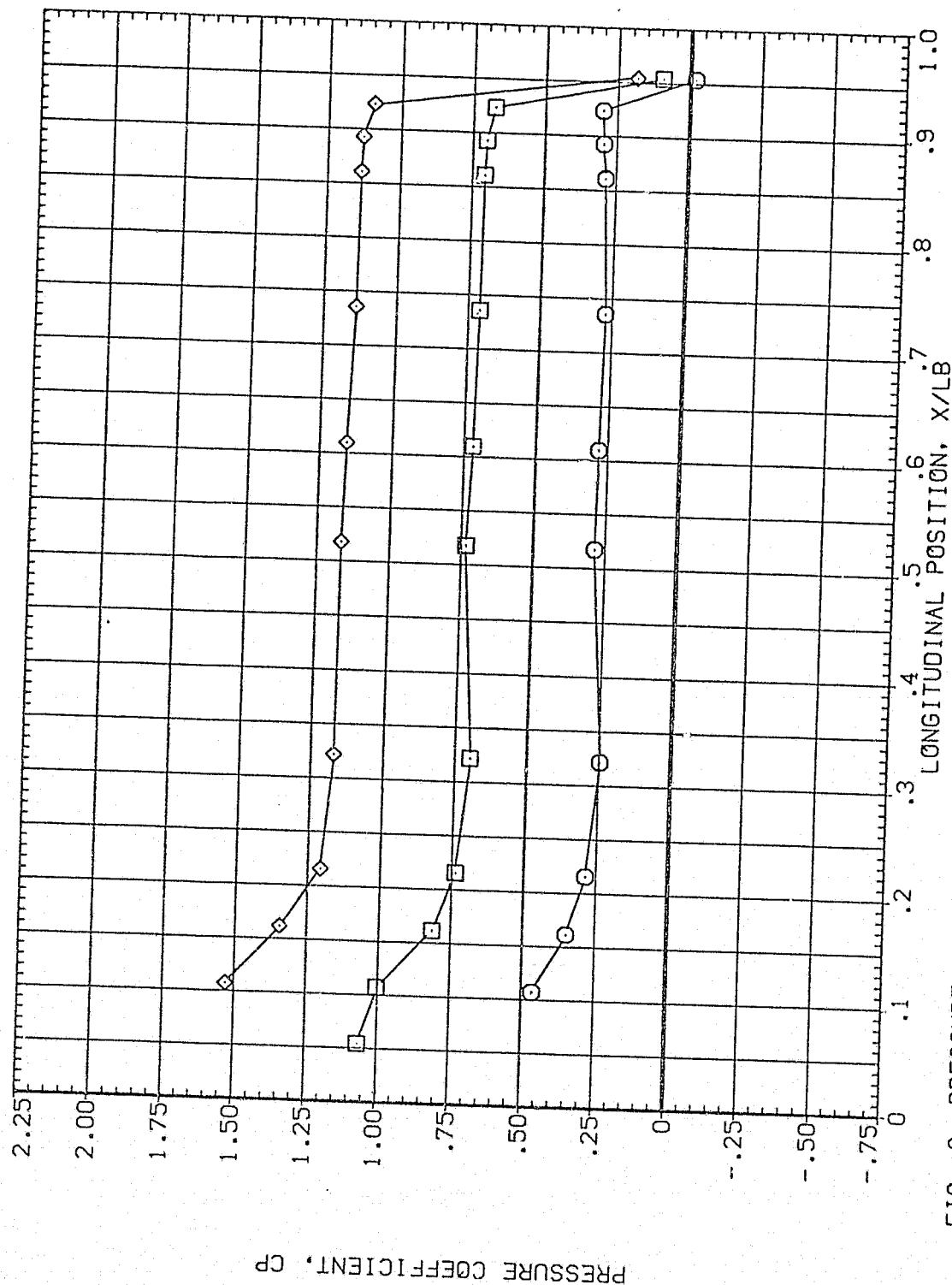


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	60.130	3.480	MOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				60.000

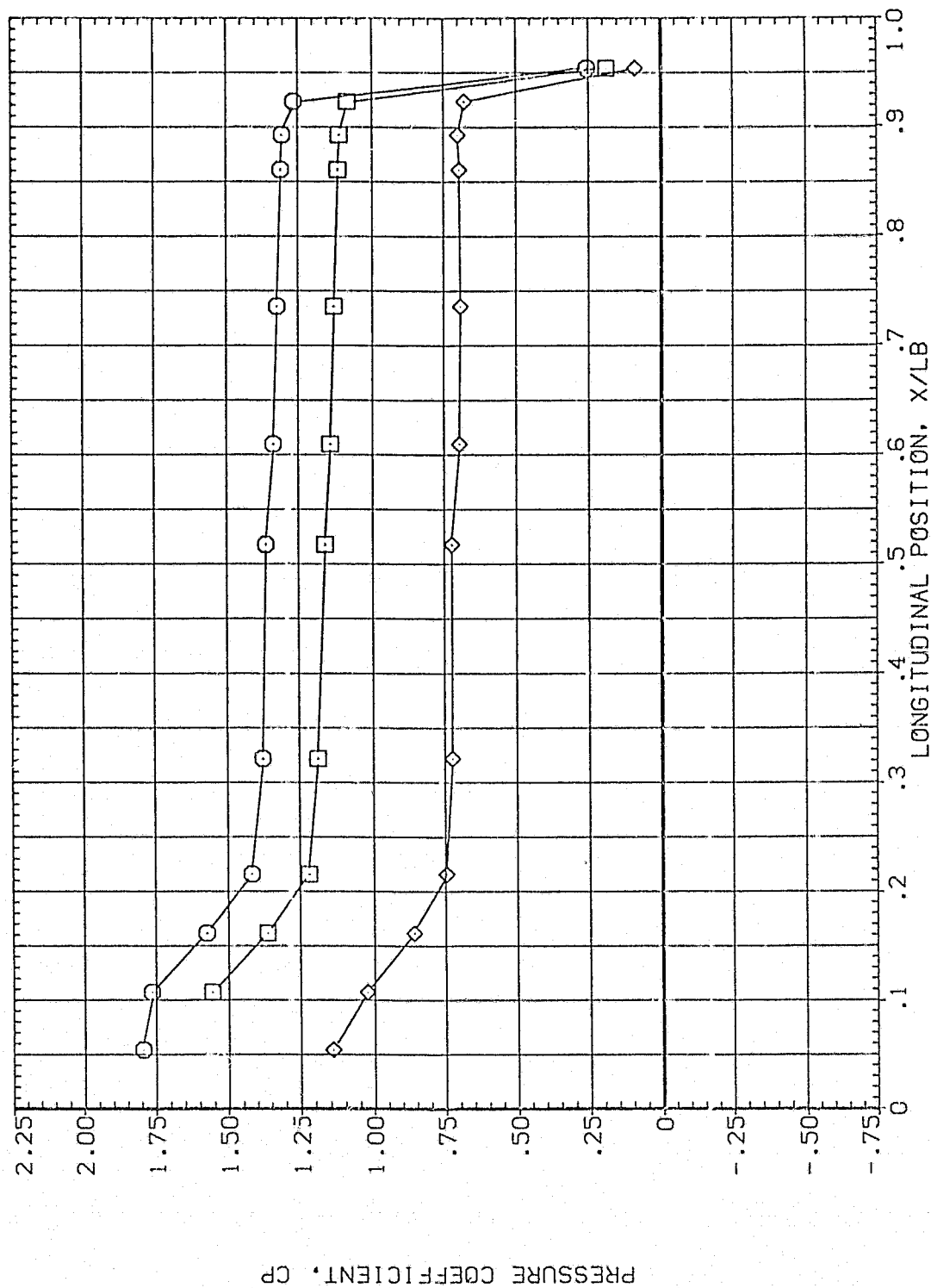


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	247.500	270.000	60.130	60.130	3.480	3.480	BETA	.000	OFFSET	60.000
○	292.500						MOUNT	2.000	PHI	.000
□										
◇										

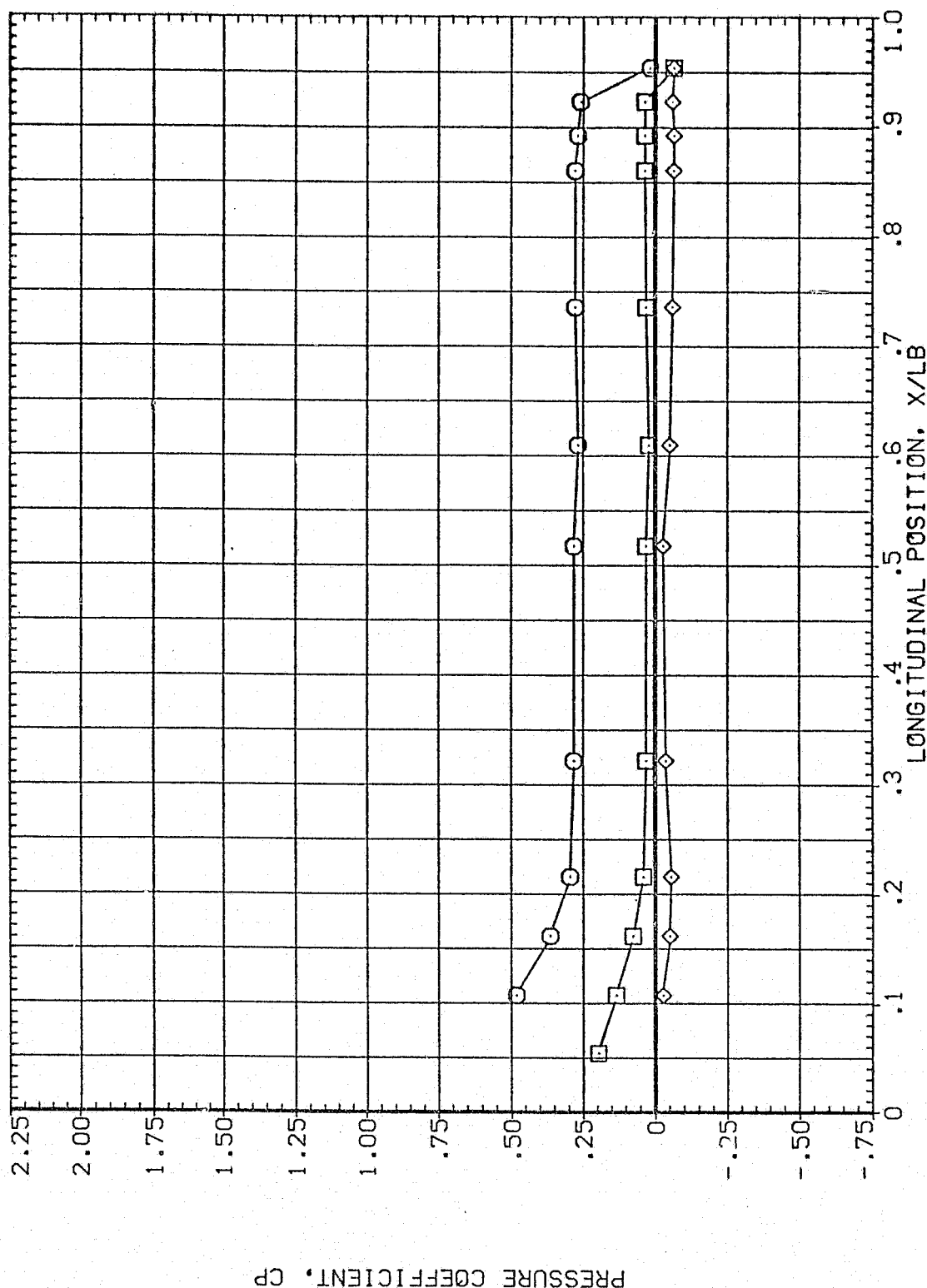


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL THETA ALPHA MACH
 ○ 315.000 60.130 3.480
 □ 326.000
 ◇ 346.000

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 60.000
 .000

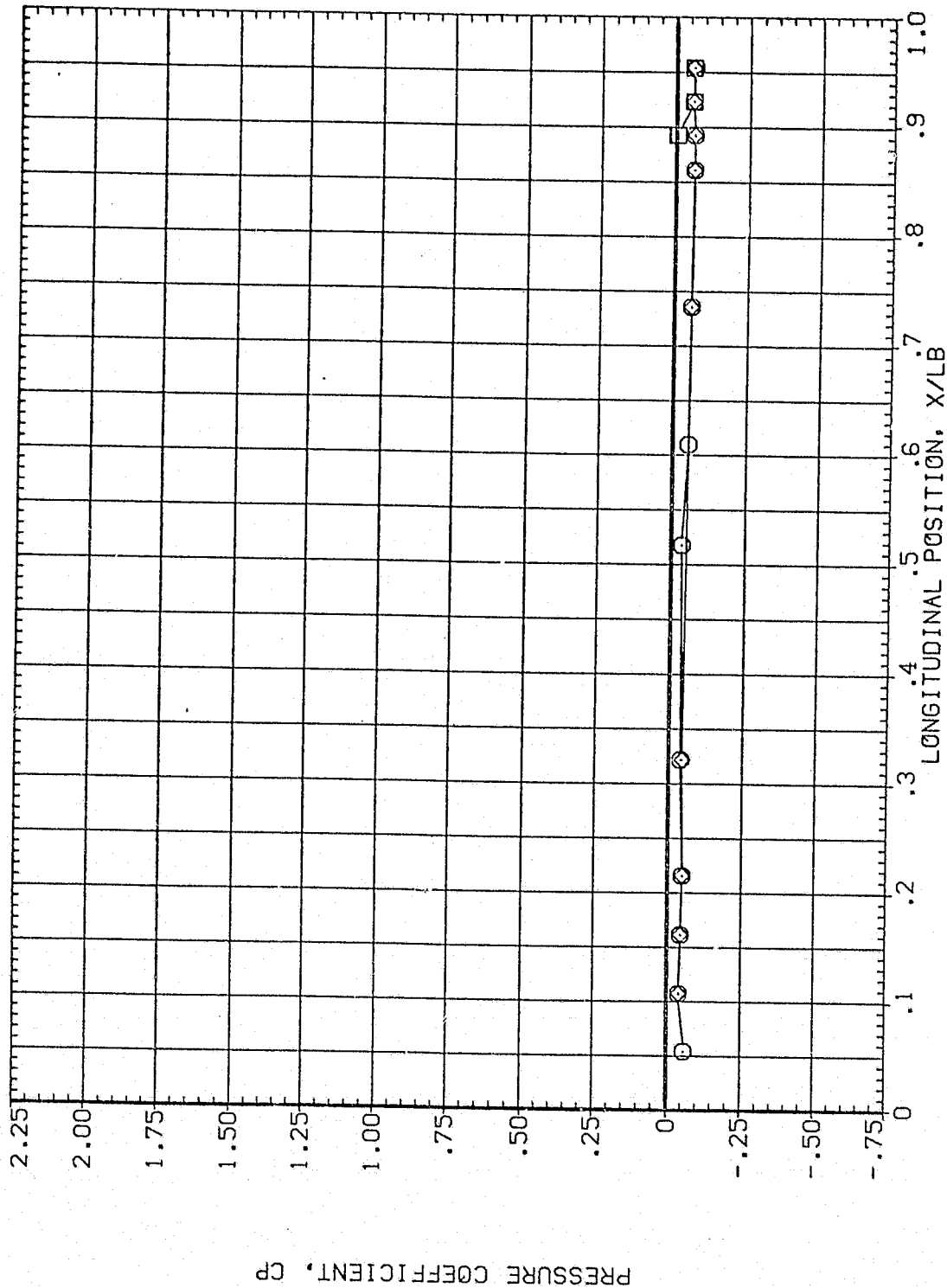


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.000	63.130	3.480	MOUNT	.000 OFFSET 60.000
□	14.000				2.000 PHI .000
◇	24.000				

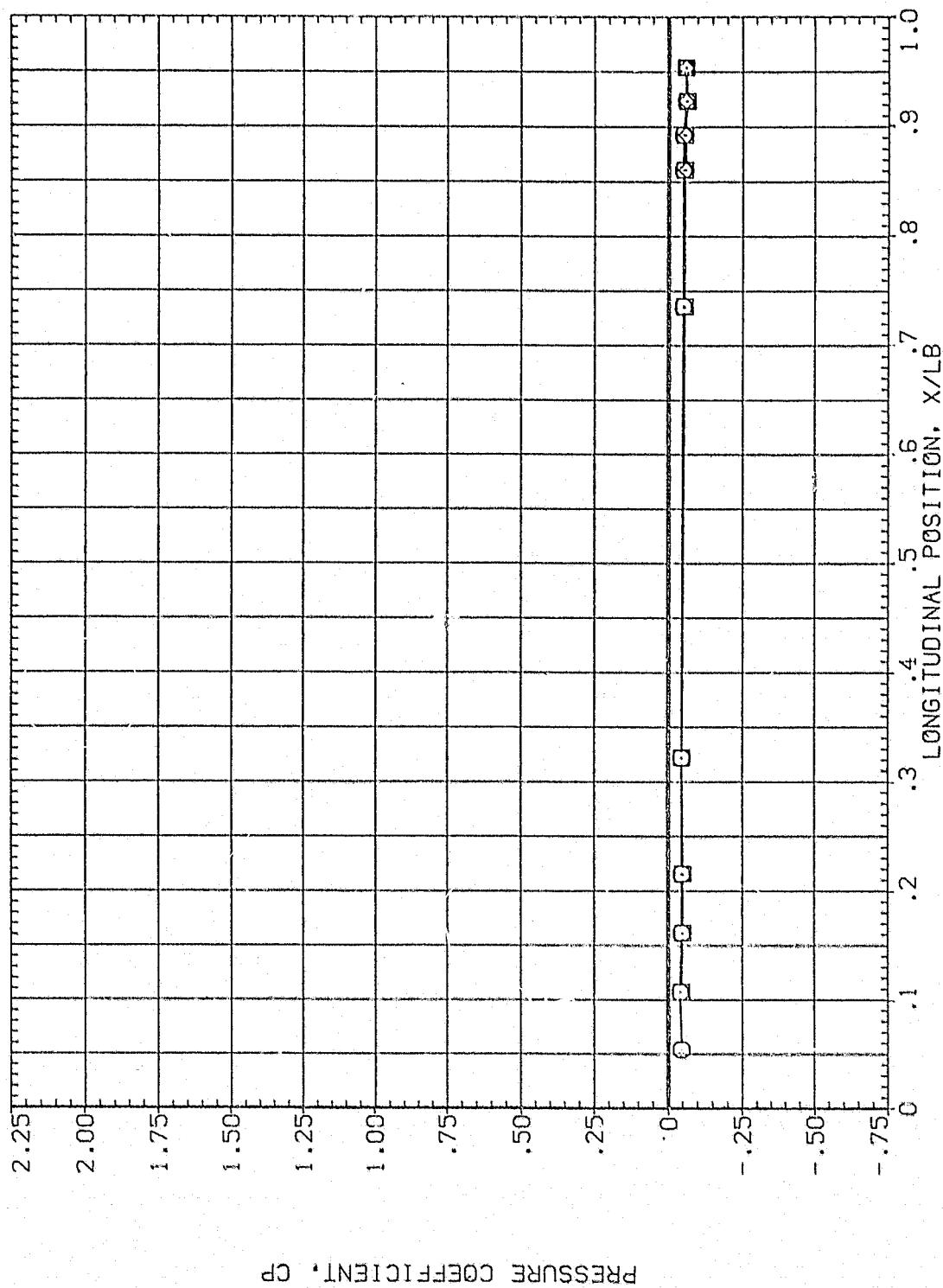


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

SYMBOL
 ○
 □
 ◇

THETA
 45.000
 67.500
 90.000

ALPHA
 63.130

MACH
 3.480

BETA
 MOUNT

PARAMETRIC VALUES
 .000 .000
 2.000 PHI

60.000
 .000

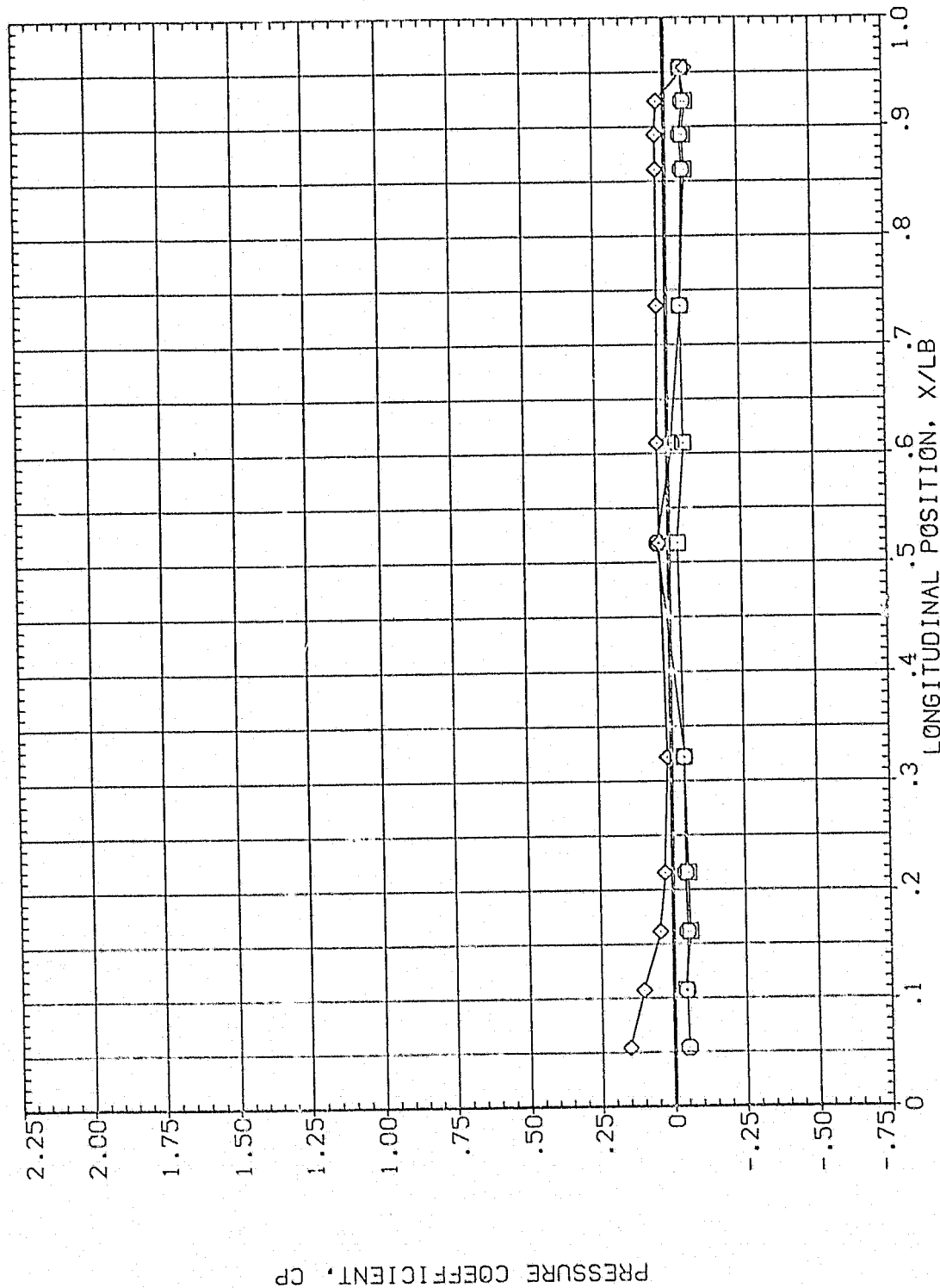


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	112.500	63.130	3.480	0.000	OFFSET
□	135.000			2.000	PHI
◇	157.500			60.000	

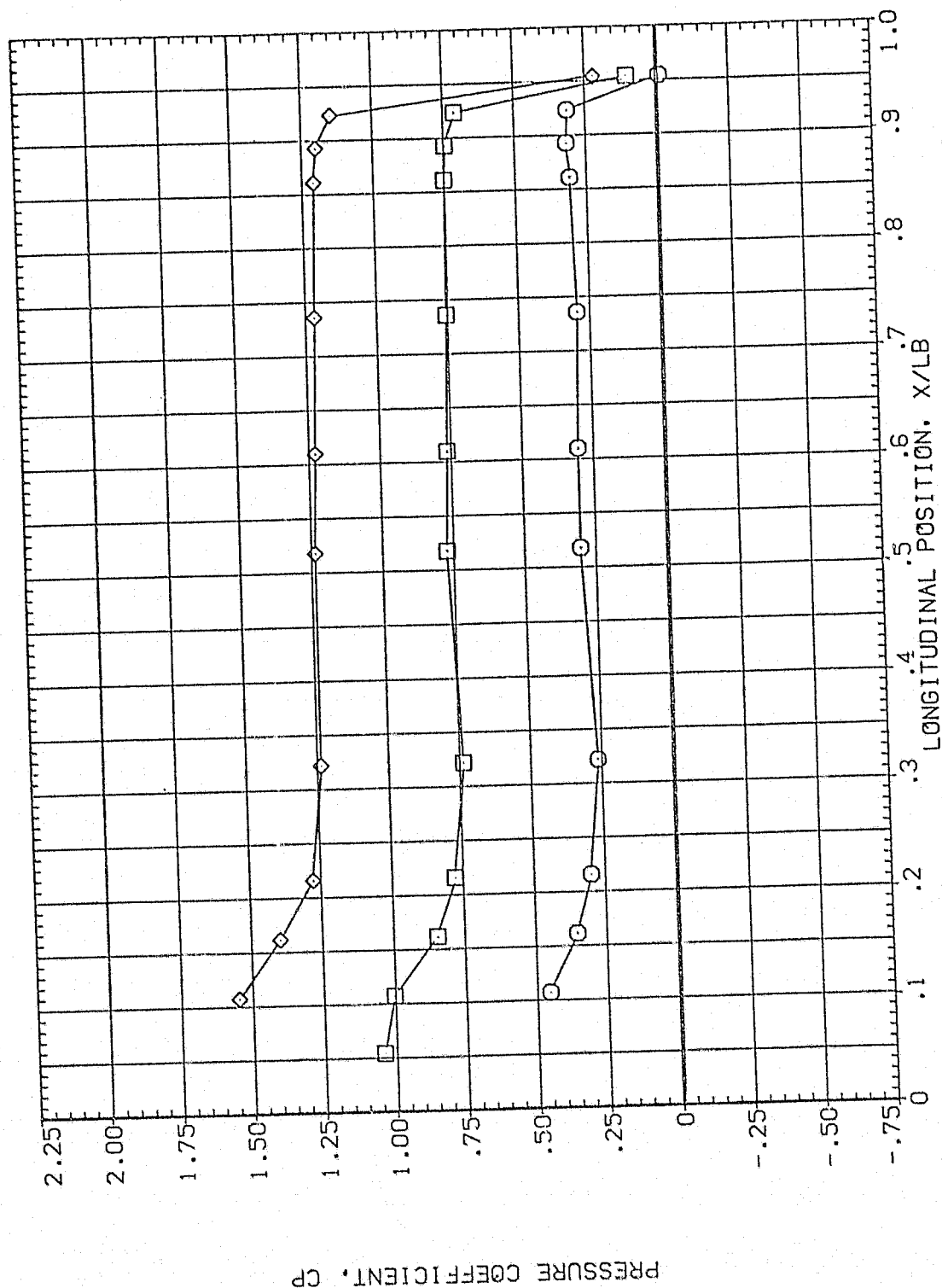


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

(P1A065)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL THETA ALPHA MACH
○ 180.000 63.130 3.480
□ 202.500
◇ 225.000

PARAMETRIC VALUES
BETA .000 OFFSET .000
MOUNT 2.000 PHI

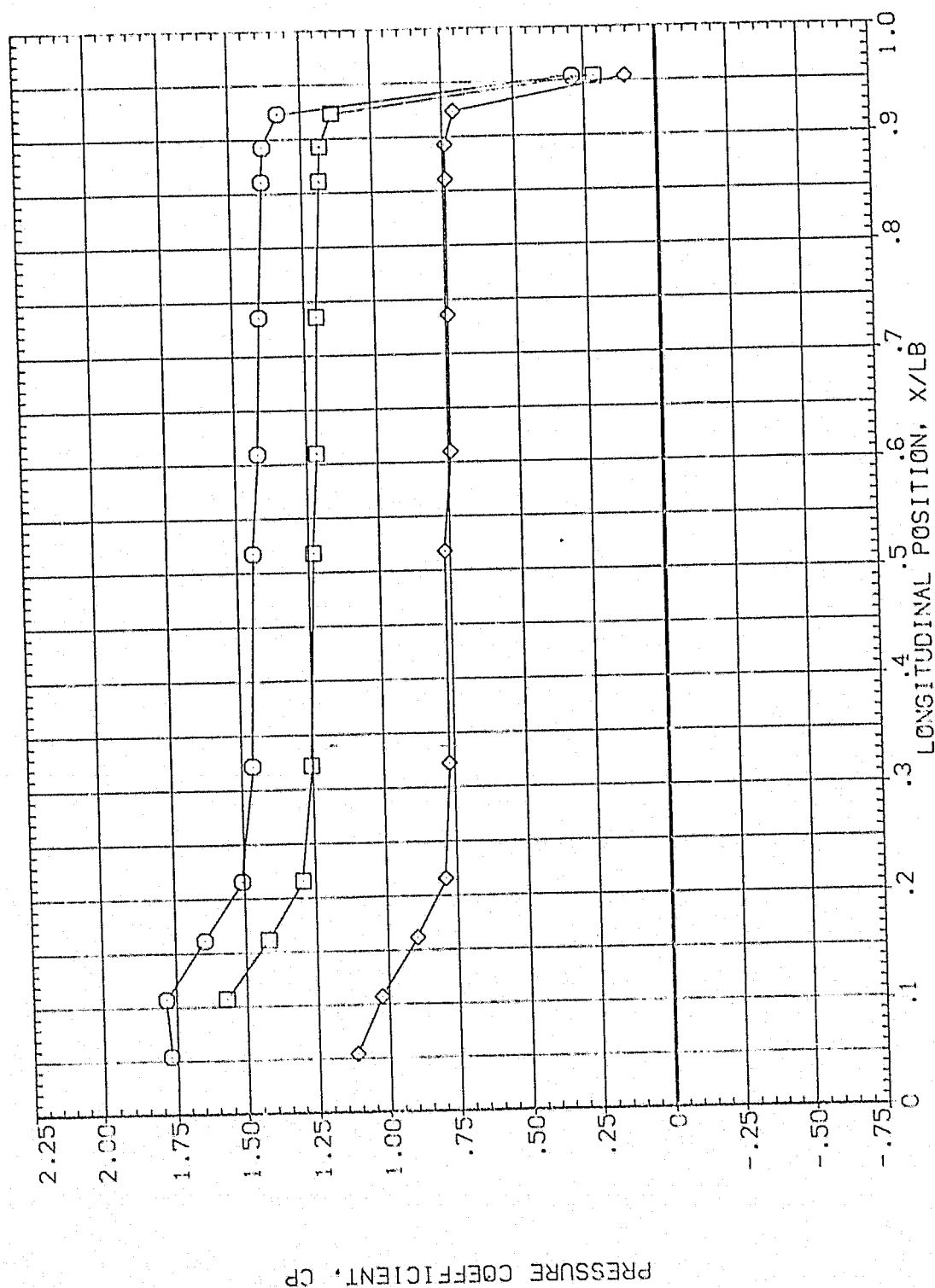


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

T2

SYMBOL

THEYA
247.500
270.000
292.500

ALPHA
63.130

3.480

PARAMETRIC VALUES		
BETA	.000	OFFSET
MOUNT	2.000	PHI

000.
000.

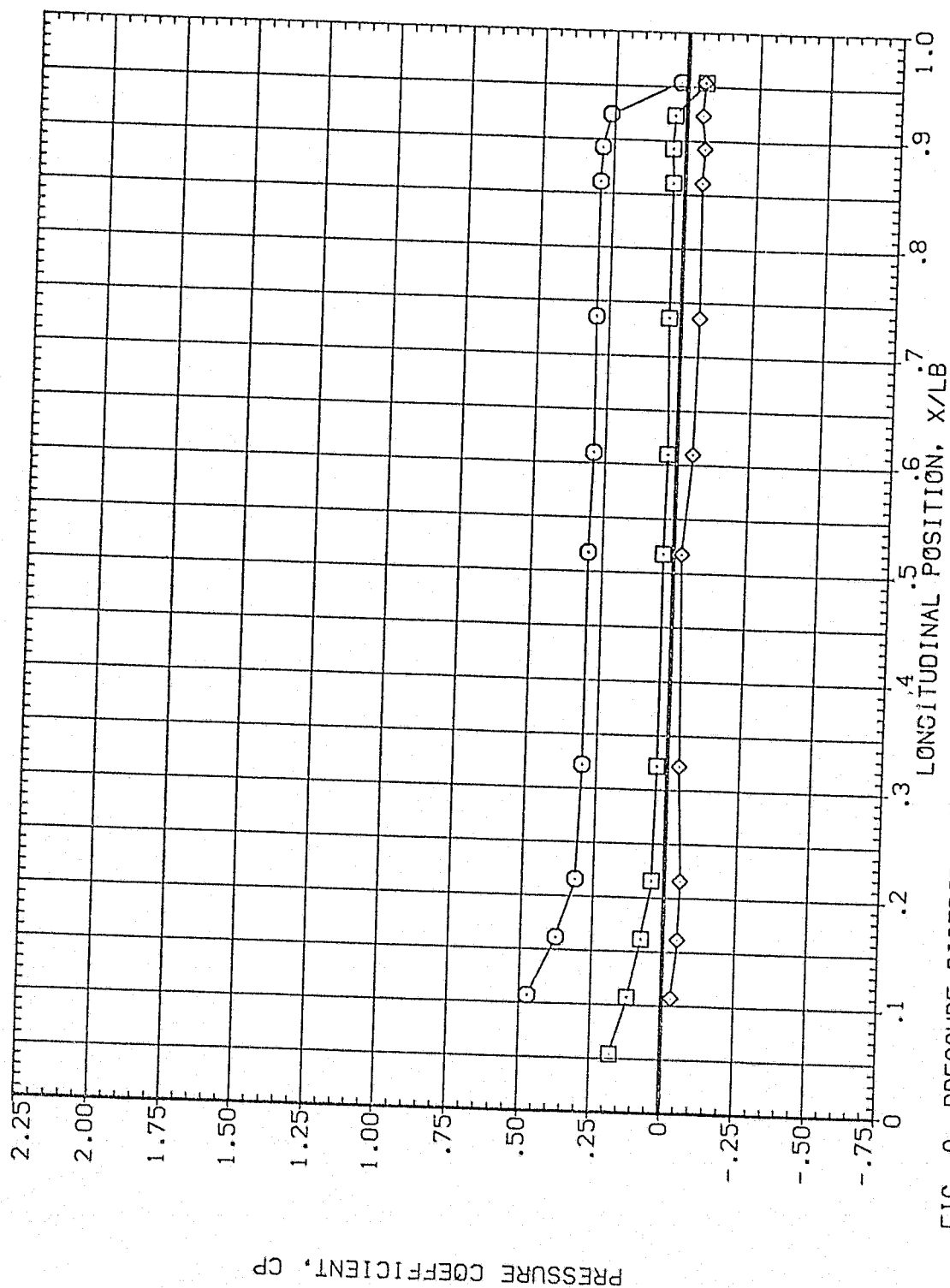


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	315.000	63.130	3.480	BETA	OFFSET	PHI	60.000			
○	326.000			MOUNT			.000			
◇	346.000						2.000			

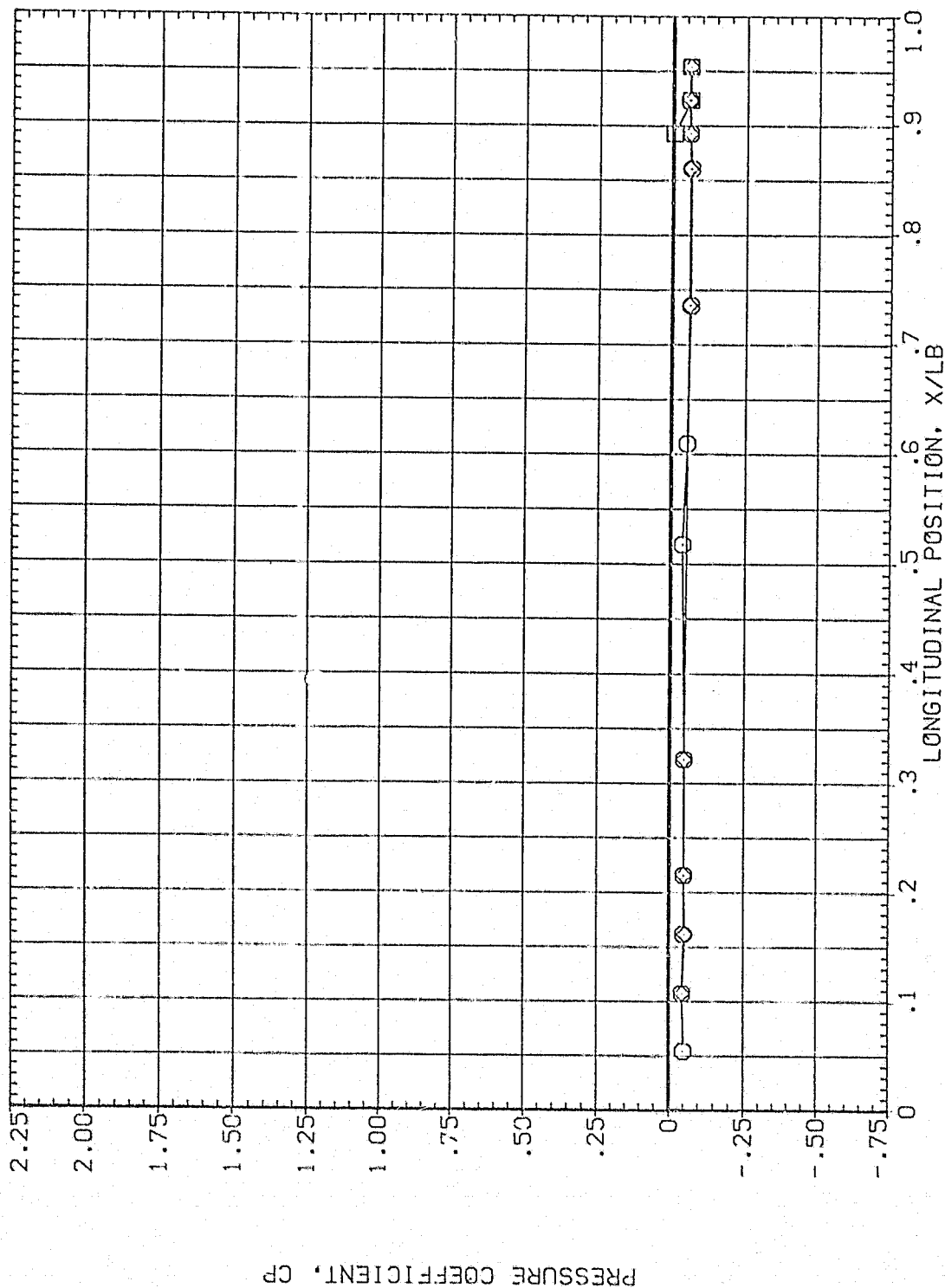


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES			
				BETA	OFFSET	PHI	
○	.300	66.130	3.480	MOUNT			60.000
□	14.000					2.000	.000
◇	24.000						

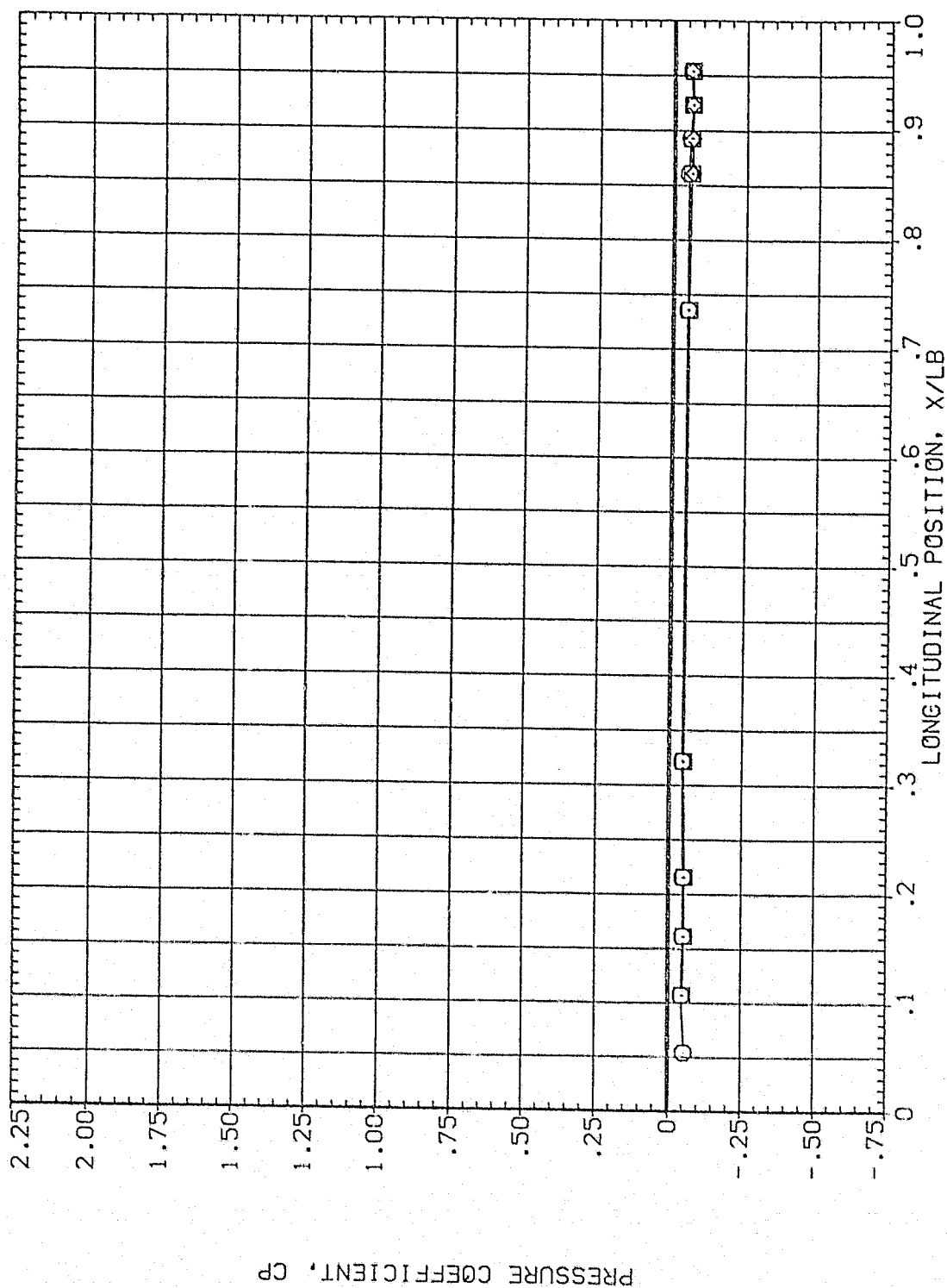


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	66.130	3.480	HEIGHT	.000
□	67.500			OFFSET	2.000
◇	90.000			PHI	60.000

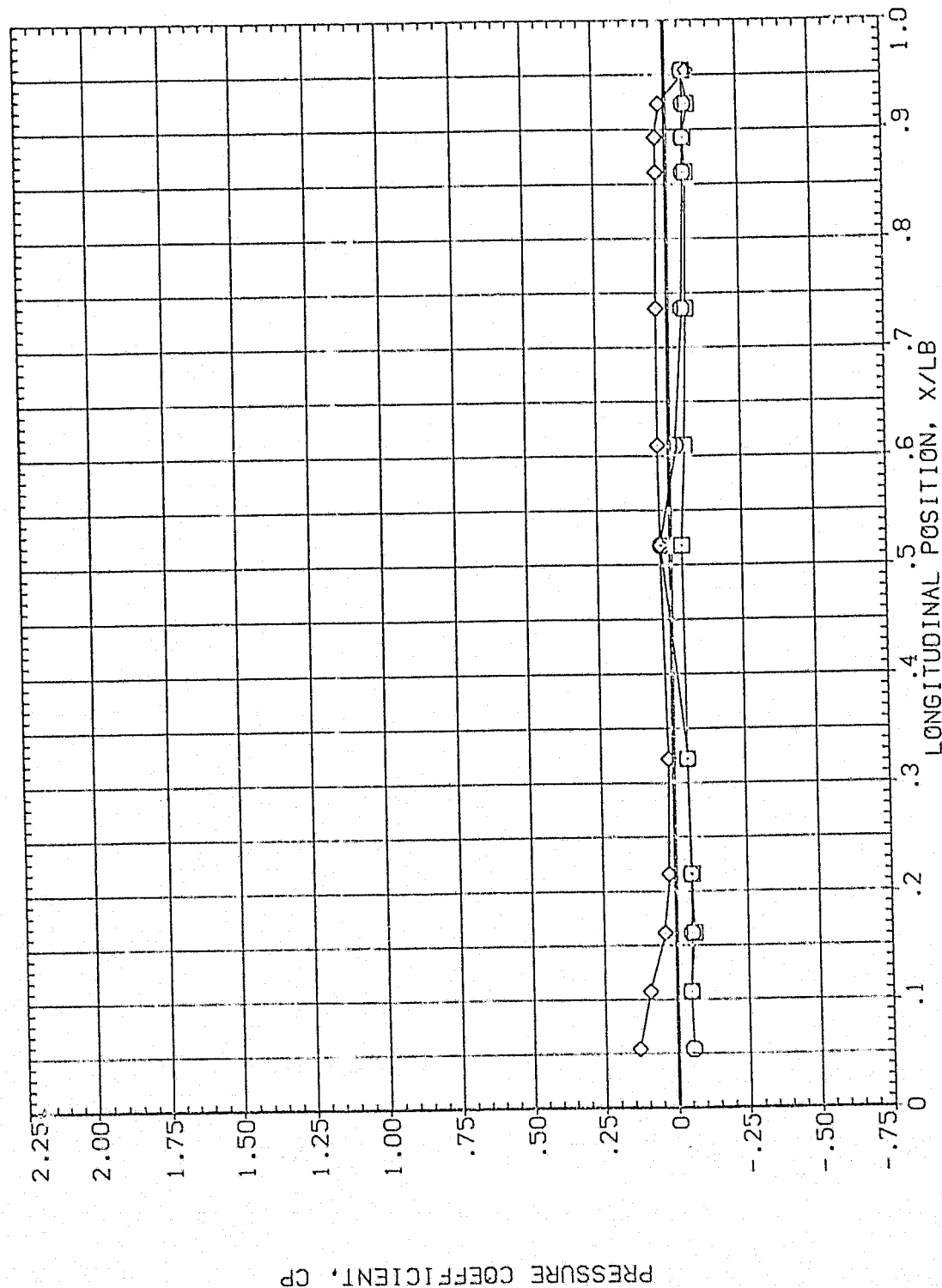


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	THETA		ALPHA	MACH	PARAMETRIC VALUES		
	112.500	135.000			BETA	OFFSET	PHI
○	135.000	157.500	66.130	3.480	.000	2.000	.000
□							
◇							

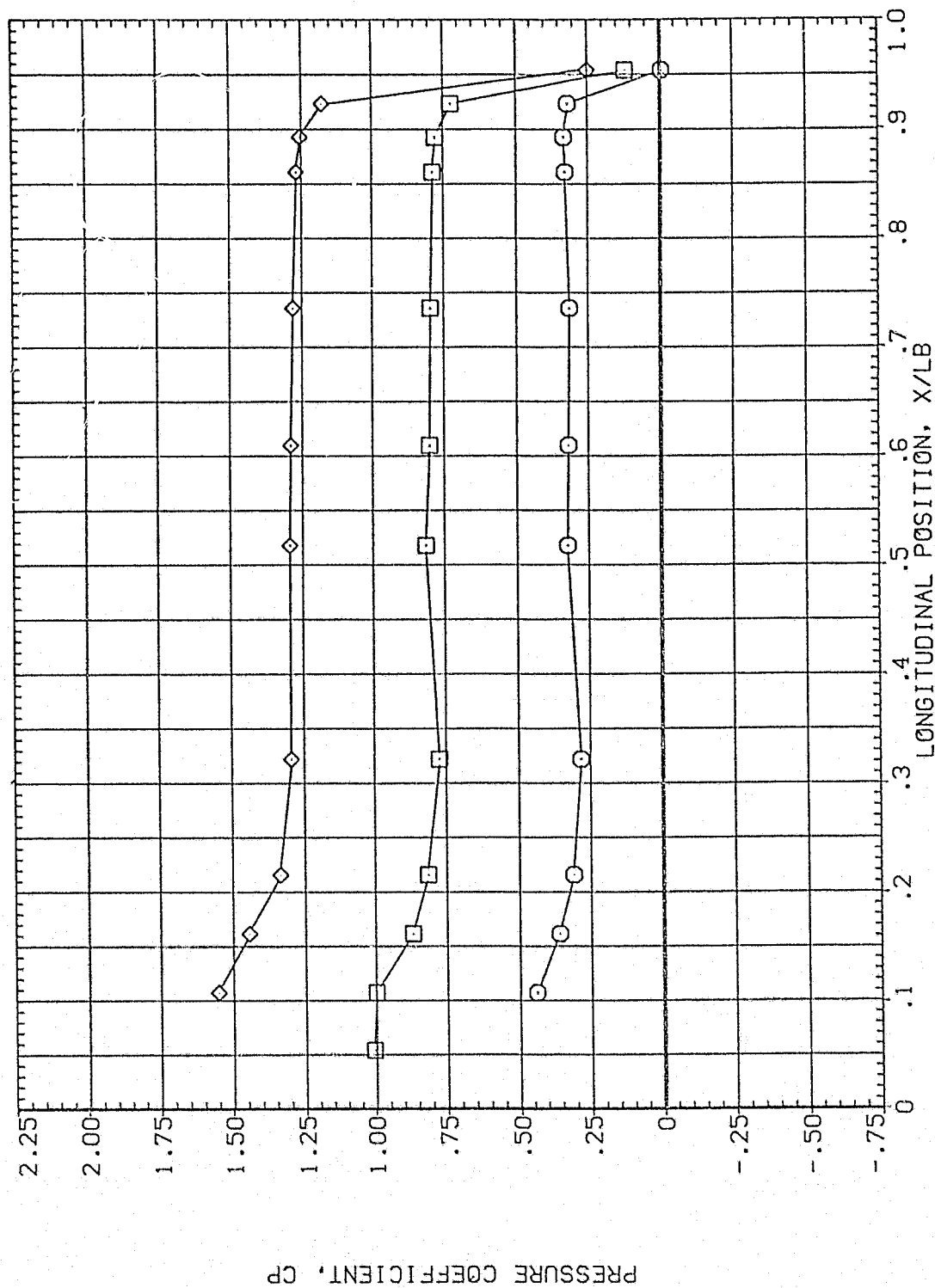


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
○
□
◇

THETA
180.000
202.500
225.000

ALPHA
55.130

MACH
3.480

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
60.000
OFFSET
PHI
.000

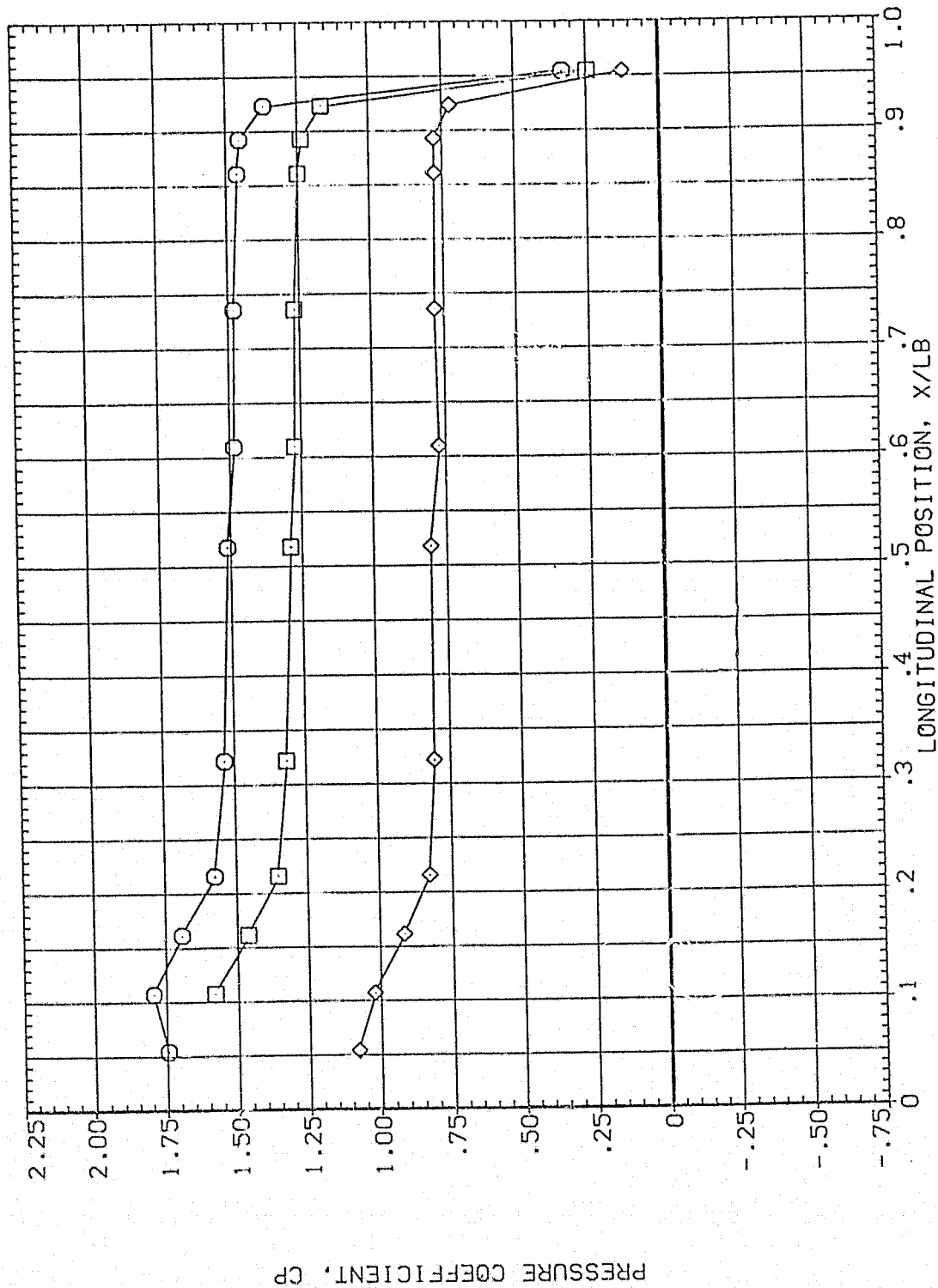


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	66.130	3.480	MOUNT	.000	60.000
□	270.000				2.000	.000
◇	292.500					

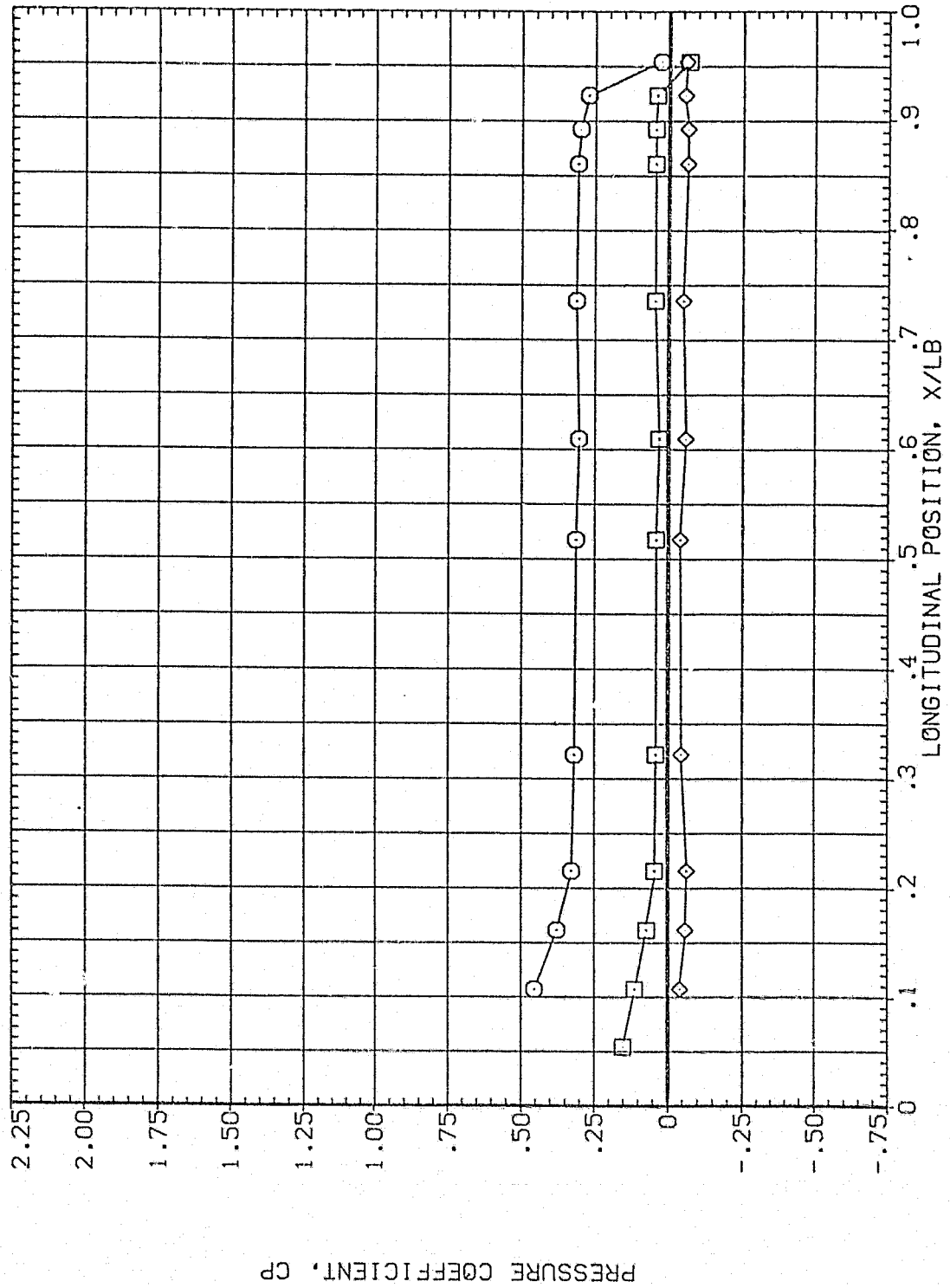


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	66.130	3.480	.000	OFFSET
□	326.000			2.000	PHI
◇	346.000				

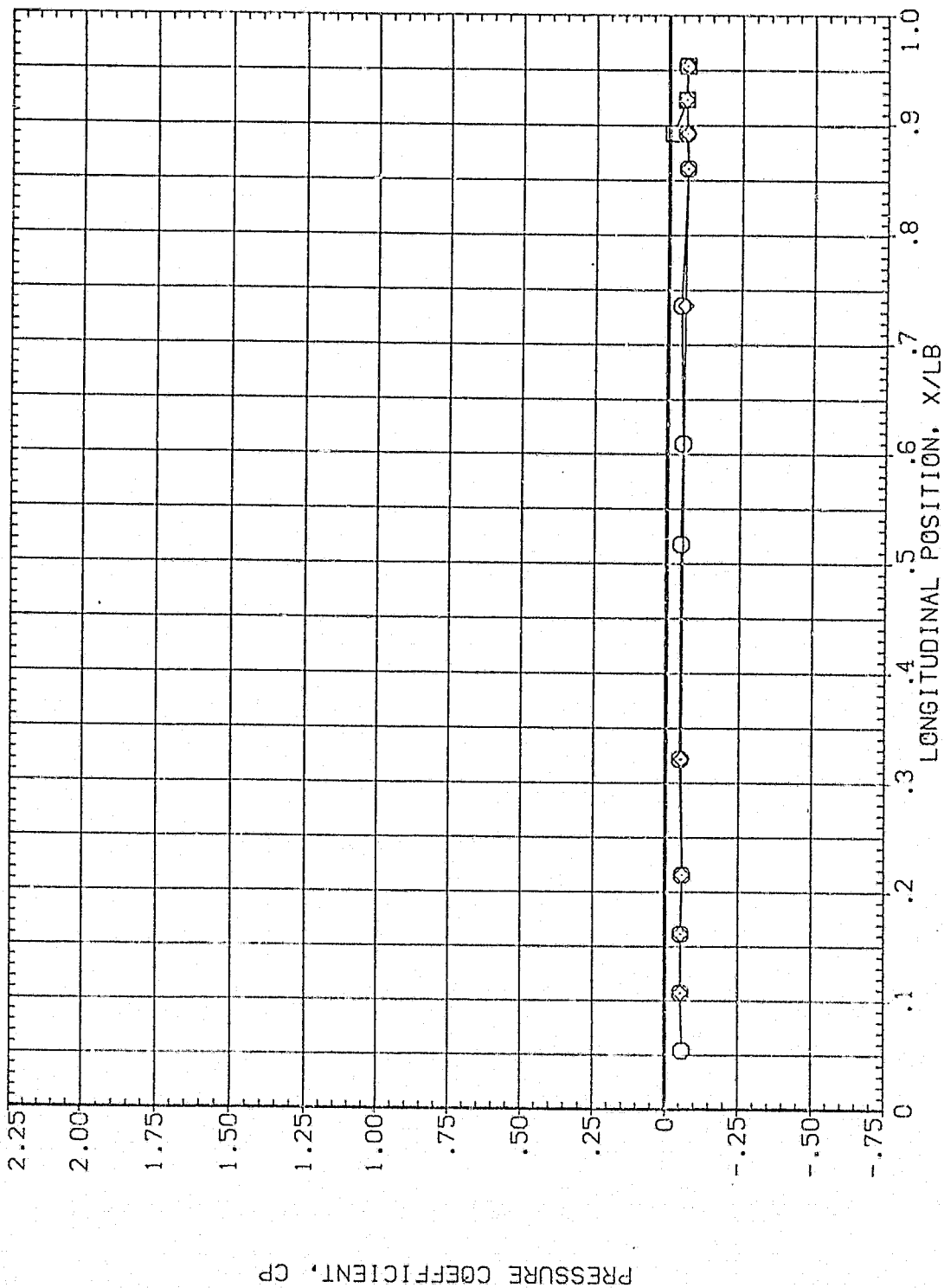


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES



0-4

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA067)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	.000	14.000	69.130	69.130	3.480	3.480	BETA	.000	OFFSET	PHI
□	14.000						MOUNT	2.000		
◇	24.000								60.000	.000

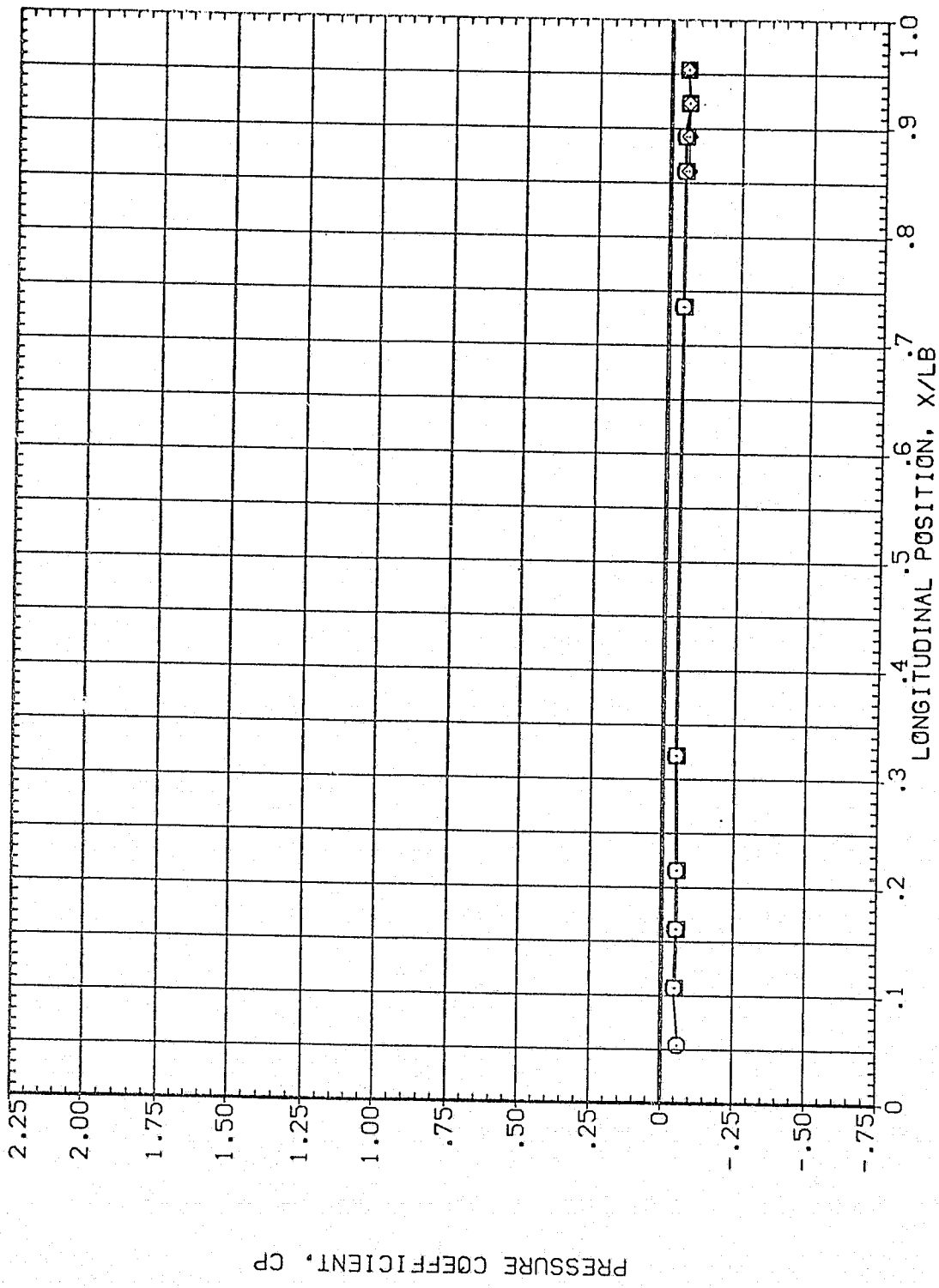


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 5' (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL	THETA		ALPHA		MACH		BETA		PARAMETRIC VALUES	
	45.000	69.130	69.130	3.480	45.000	69.130	MOUNT	2.000	OFFSET	60.000
○	67.500								PHI	.000
◇	90.000									

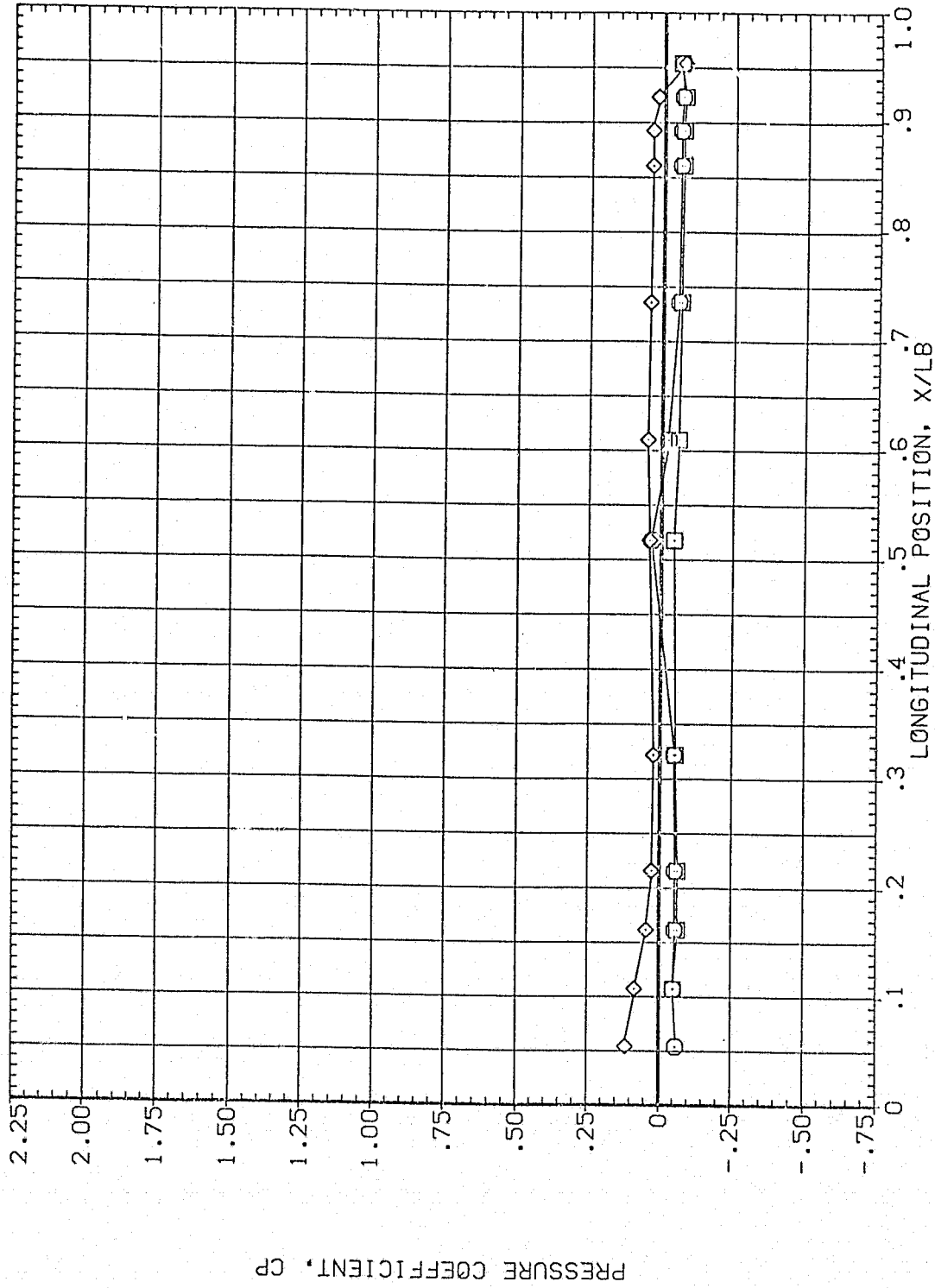


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	112.500	69.130	3.480	MOUNT	.000
□	135.000			OFFSET	2.000
◇	157.500			PHI	.000

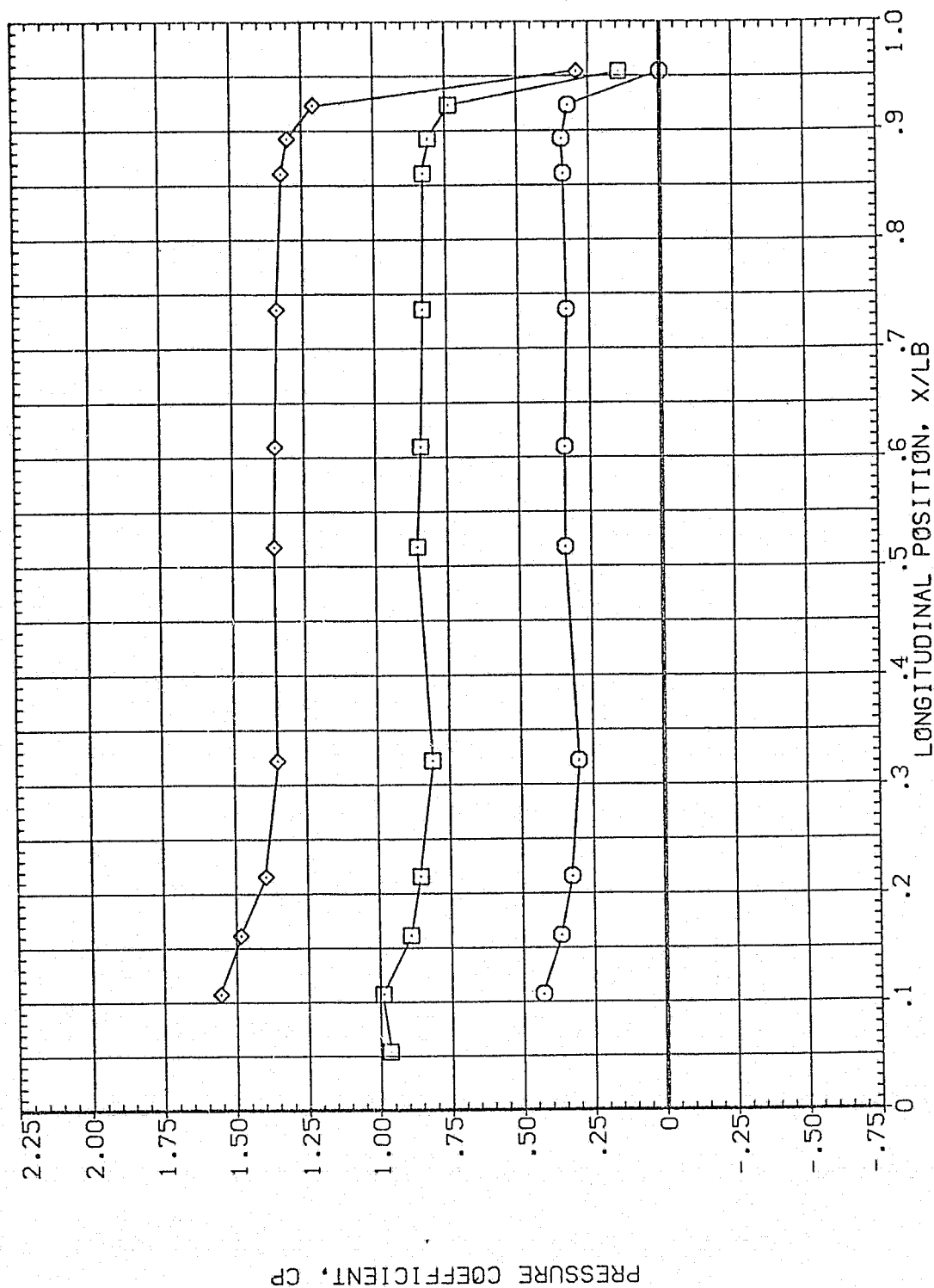


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	69.130	3.480	MOUNT	.000 OFFSET PHI
□	202.500				2.000 PHI
◇	225.000				60.000 .000

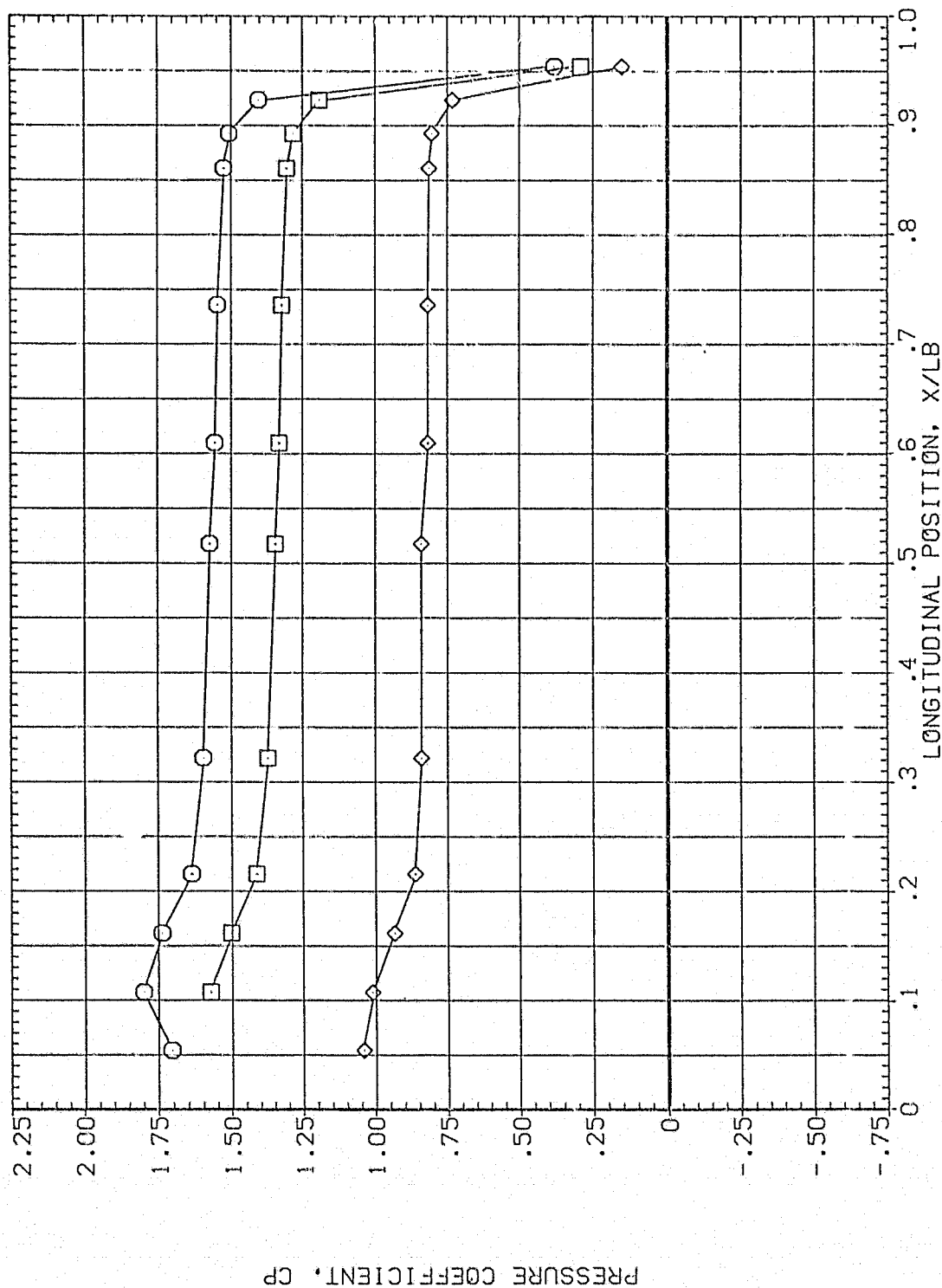


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
○	247.500	69.130	3.480	MOUNT	2.000	PHI
□	270.000					.000
◇	292.500					

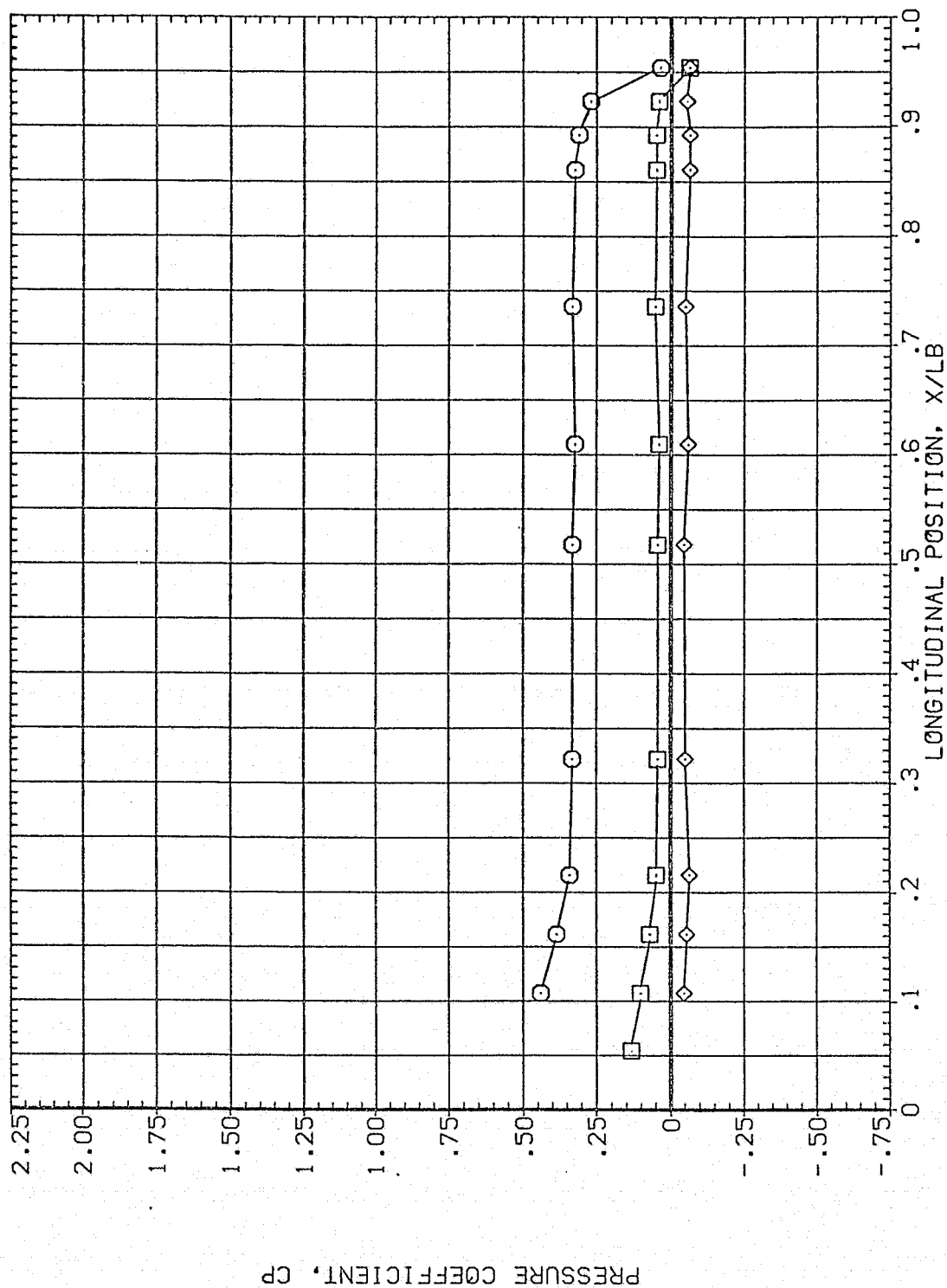


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	69.130	3.480	MOUNT	.000 OFFSET
□	326.000				2.000 PHI
◇	346.000				60.000

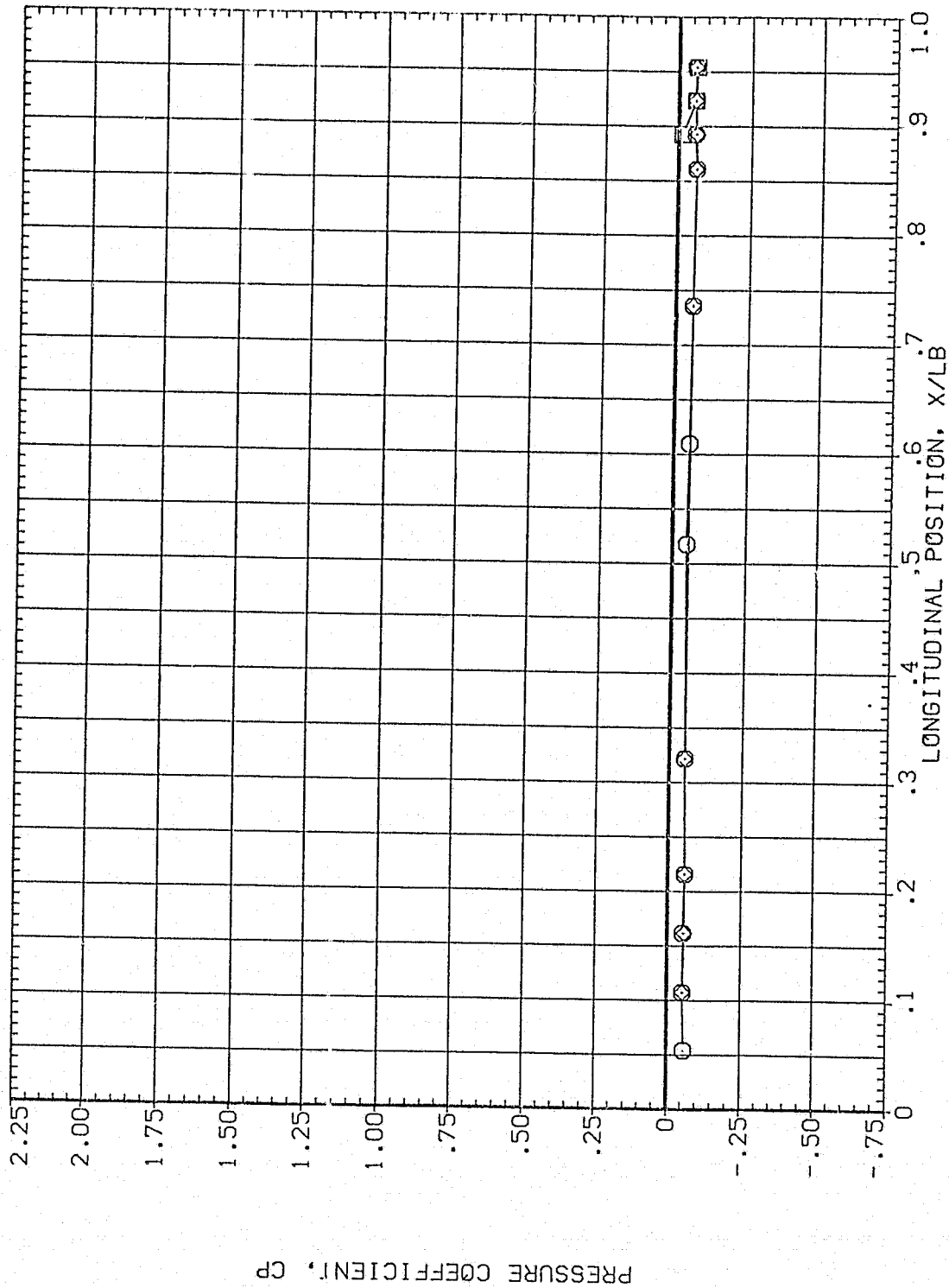


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	PARAMETRIC VALUES		
	THETA	ALPHA	MACH
○	.000	69.980	3.480
□	14.000		
◇	24.000		
		BETA	80.000
		MOUNT	.000
		OFFSET	PHI
		2.000	

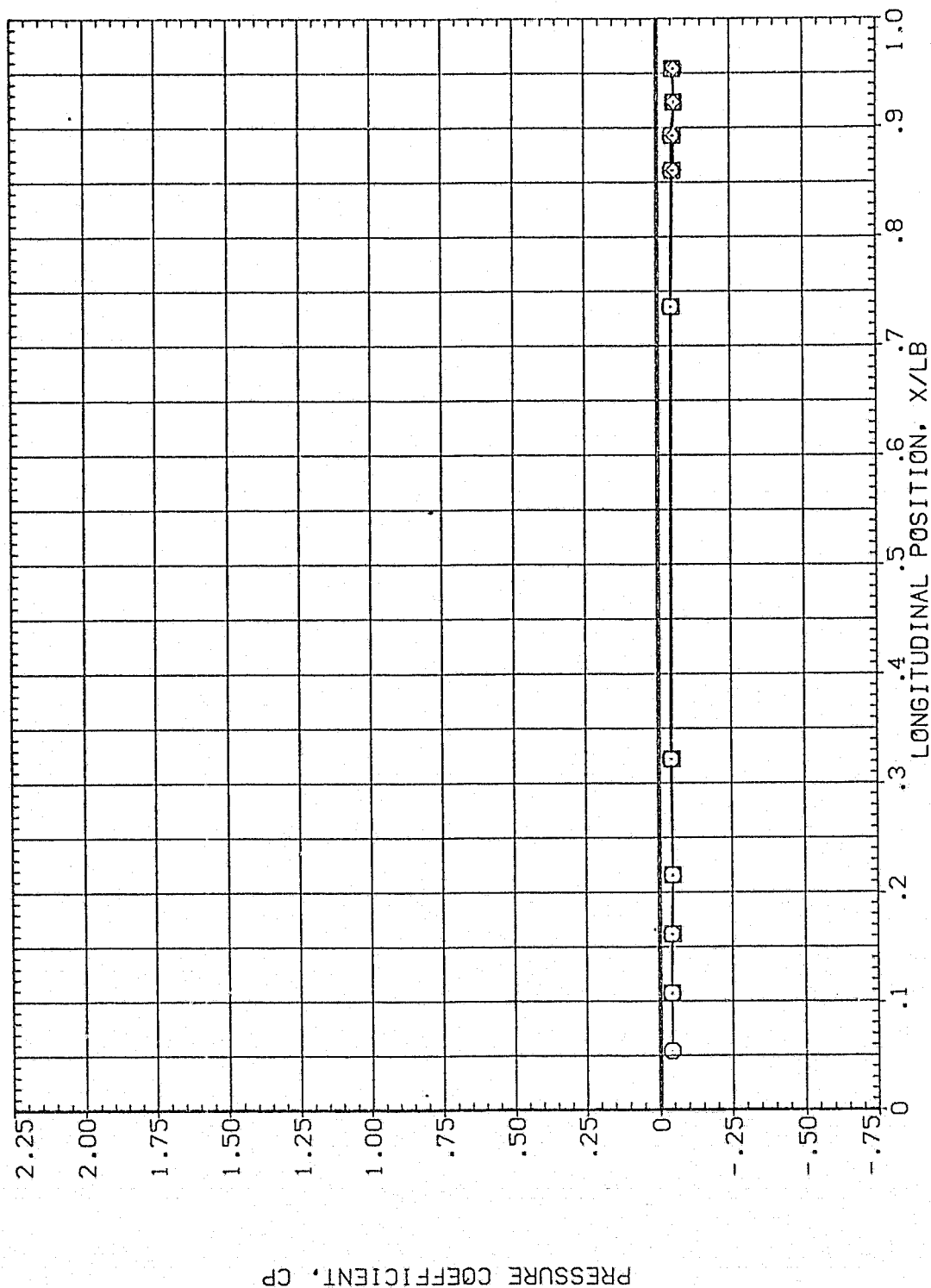


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	THETA	ALPHA	MACH
○	45.000	69.980	3.480
□	67.500		
◇	90.000		

PARAMETRIC VALUES		
BETA	.000	OFFSET
MOUNT	2.000	PHI
		90.000
		.000

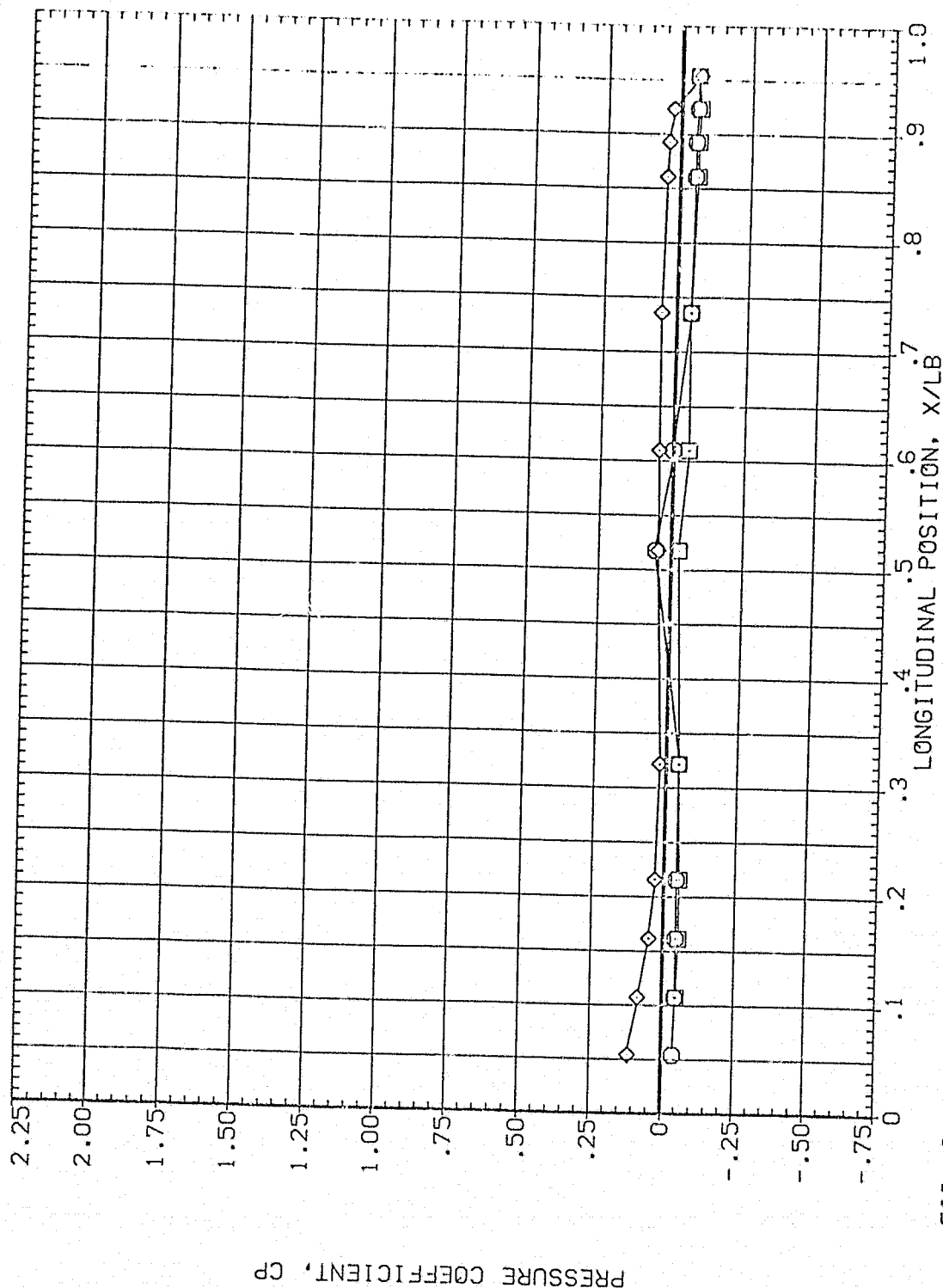


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	112.500	69.980	3.480	MOUNT	.000
□	135.000			PHI	2.000
◇	157.500			OFFSET	80.000
					.000

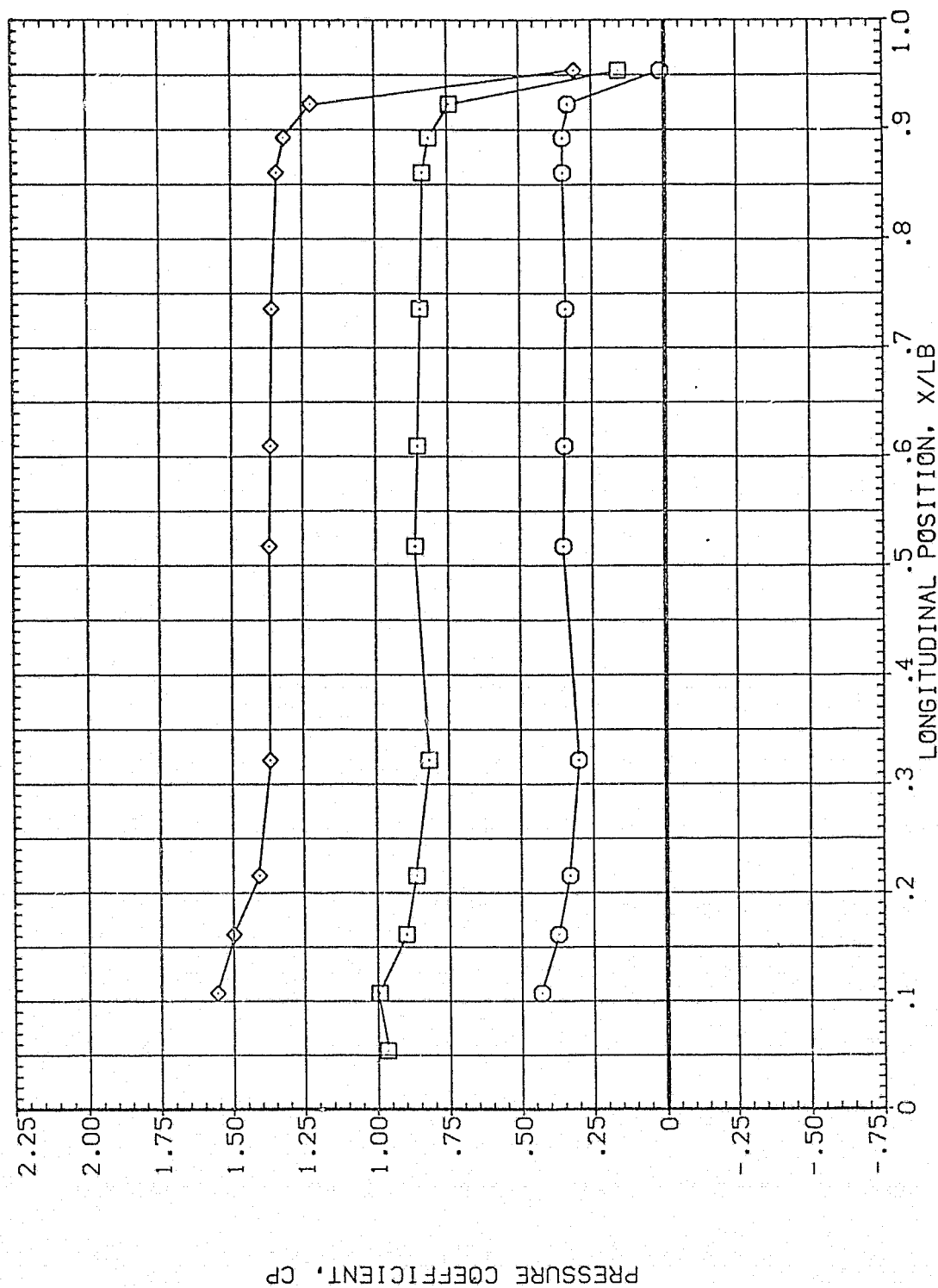


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	59.980	3.480	MOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				80.000 .000

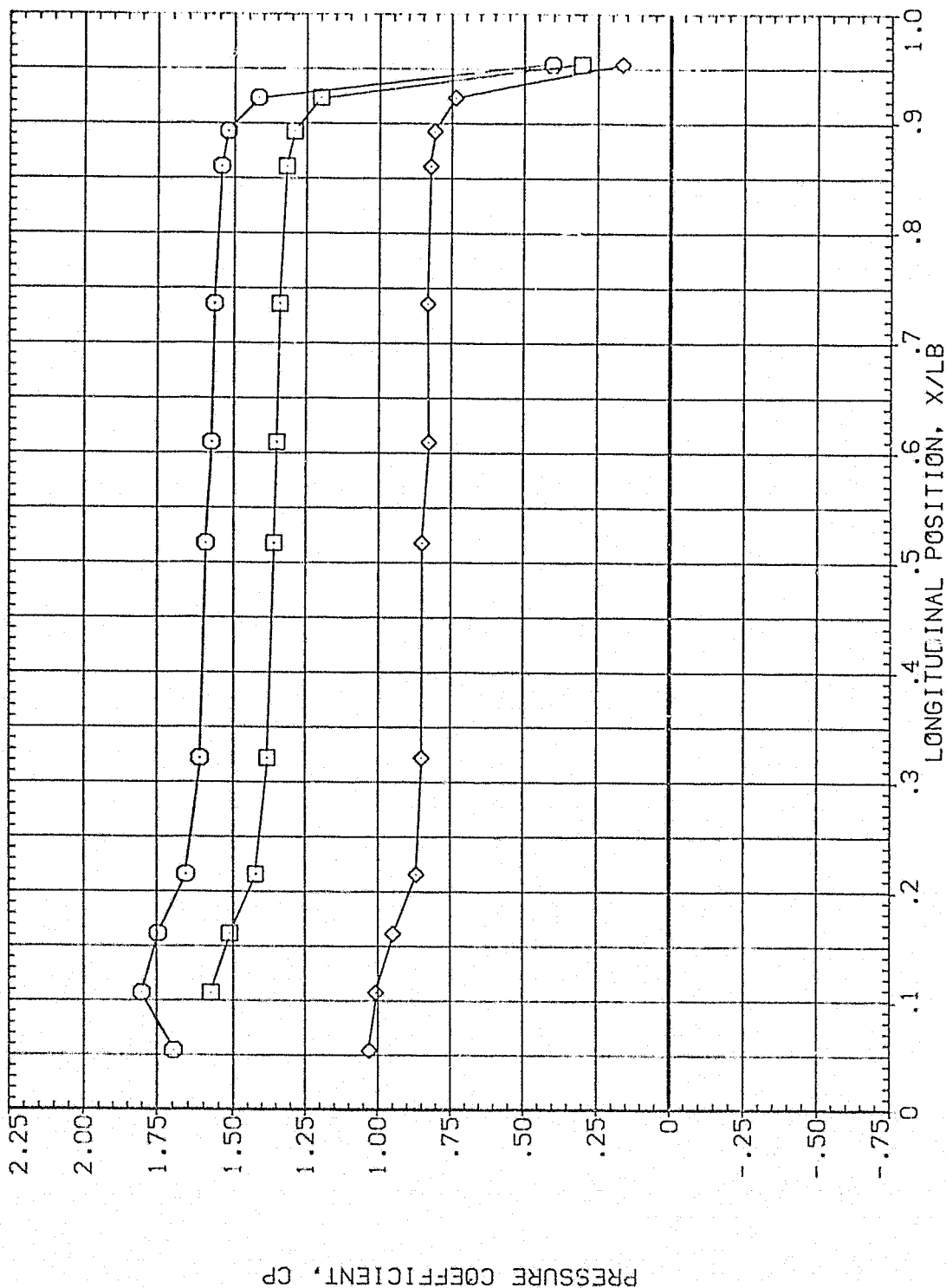


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	69.980	3.480	.000	.000	.000
□	270.000			2.000		
◇	292.500					

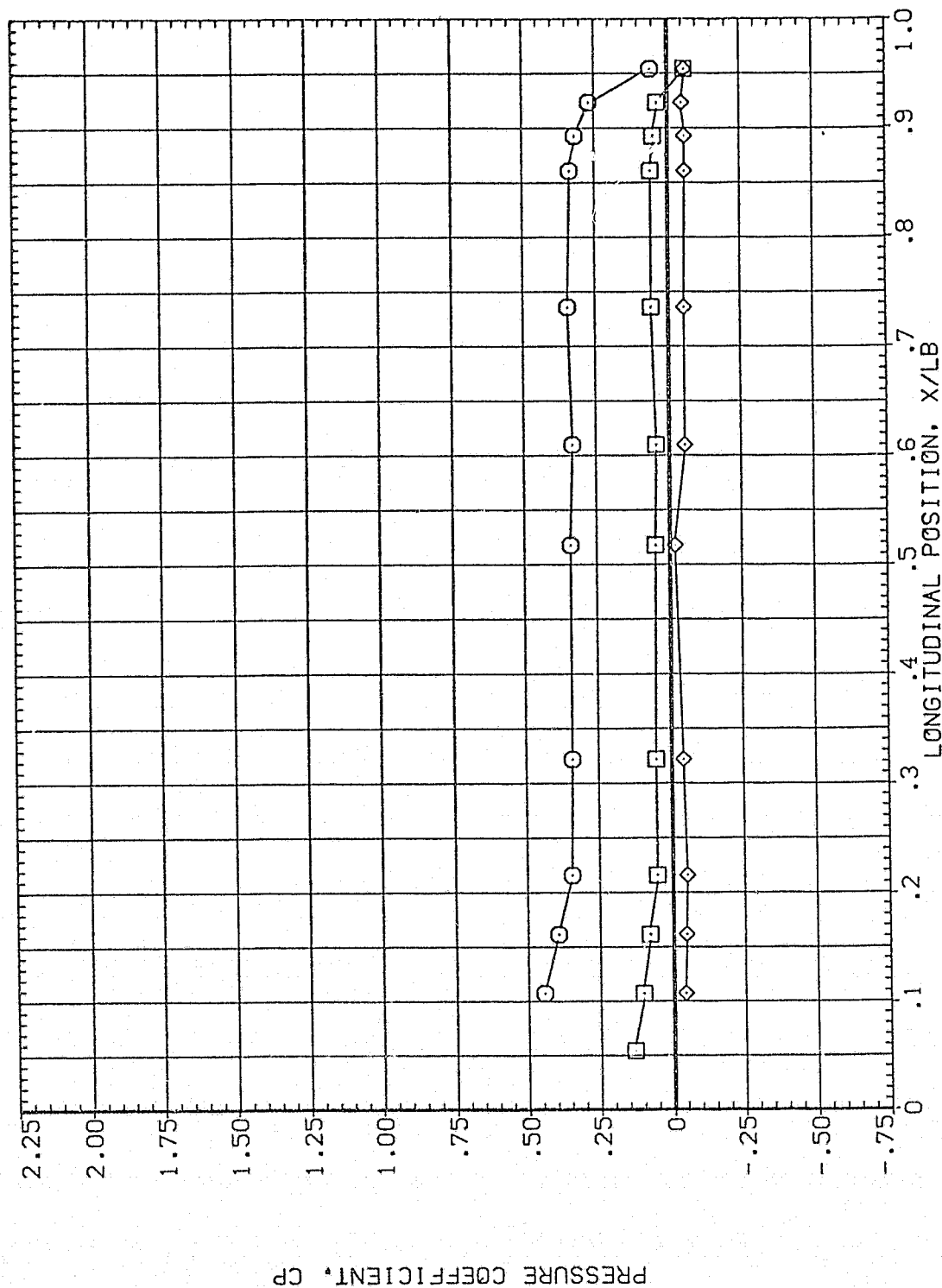


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL THETA ALPHA MACH
 O 315.000 69.980 3.480
 □ 326.000
 ◇ 346.000

PARAMETRIC VALUES
 .000 .000 80.000
 BETA OFFSET
 MOUNT PHI .000

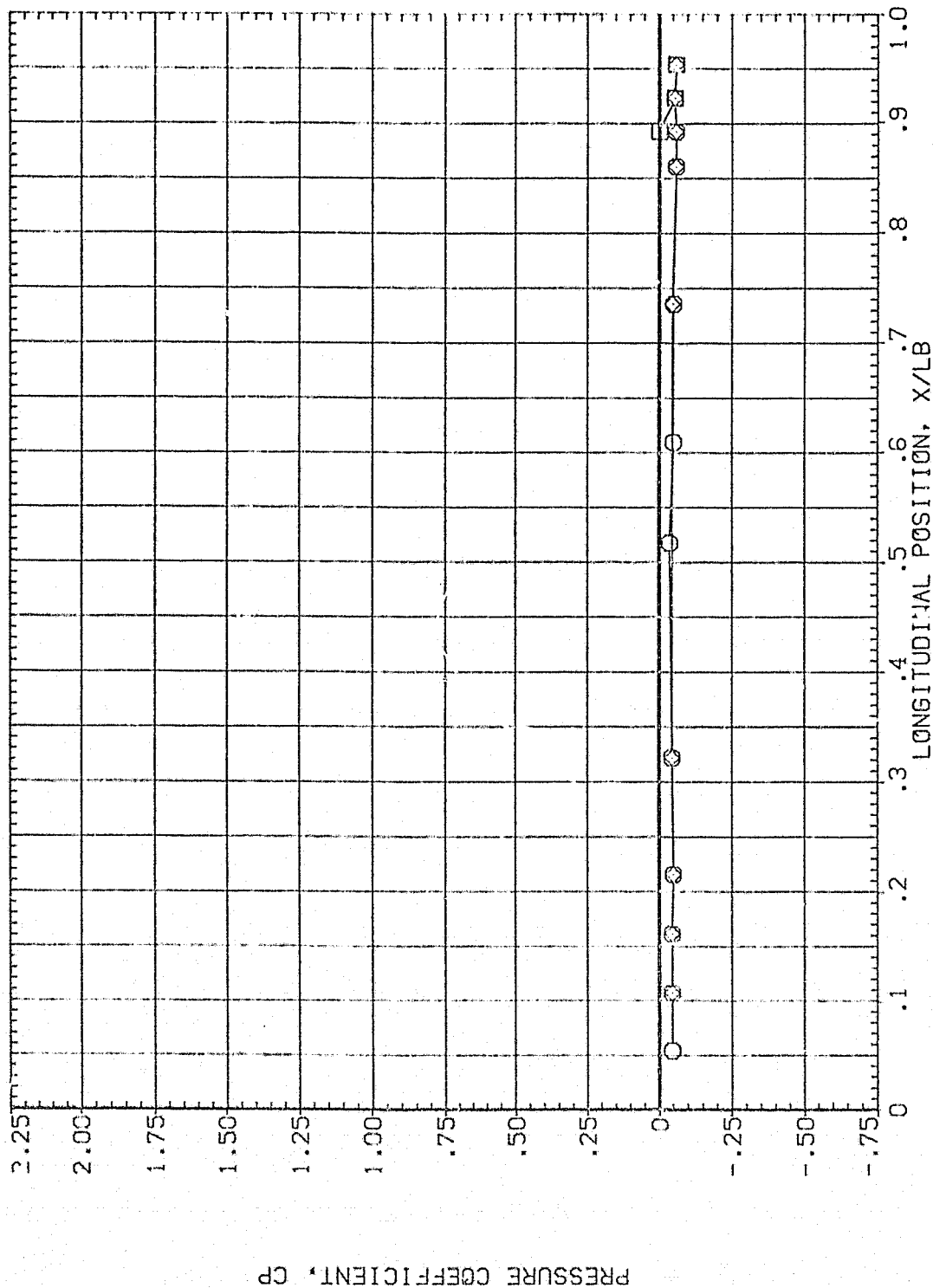


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A069)

SYMBOL
 ○ □ ◇

THETA
 .000
 14.000
 24.000

ALPHA
 71.880

MACH
 3.480

BETA
 MOUNT

PARAMETRIC VALUES
 .000 80.000
 2.000 PHI .000

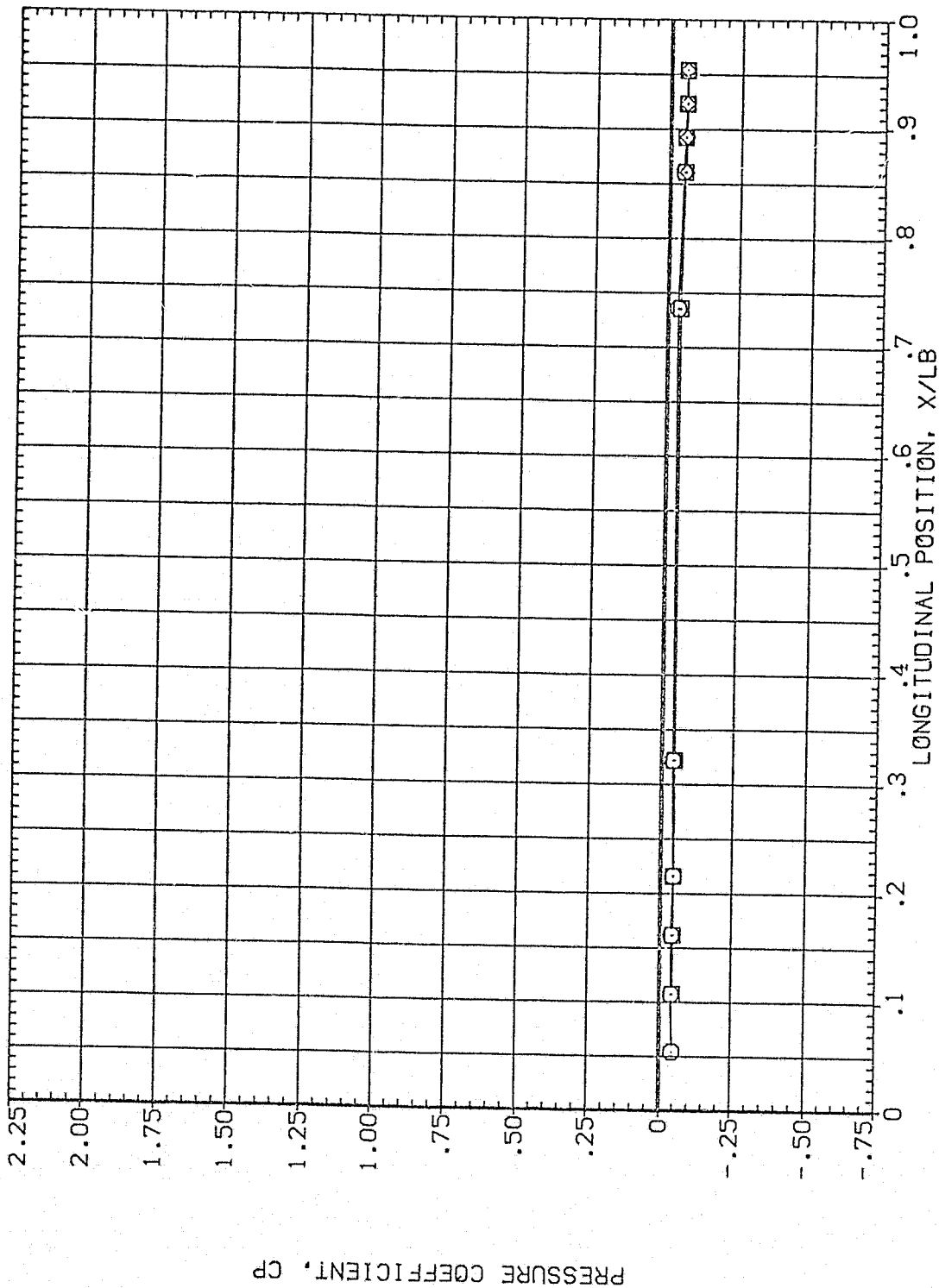


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
○	45.000	71.880	3.480	BETA	.000	OFFSET
□	67.500			MOUNT	2.000	PHI
◇	90.000					80.000
						.000

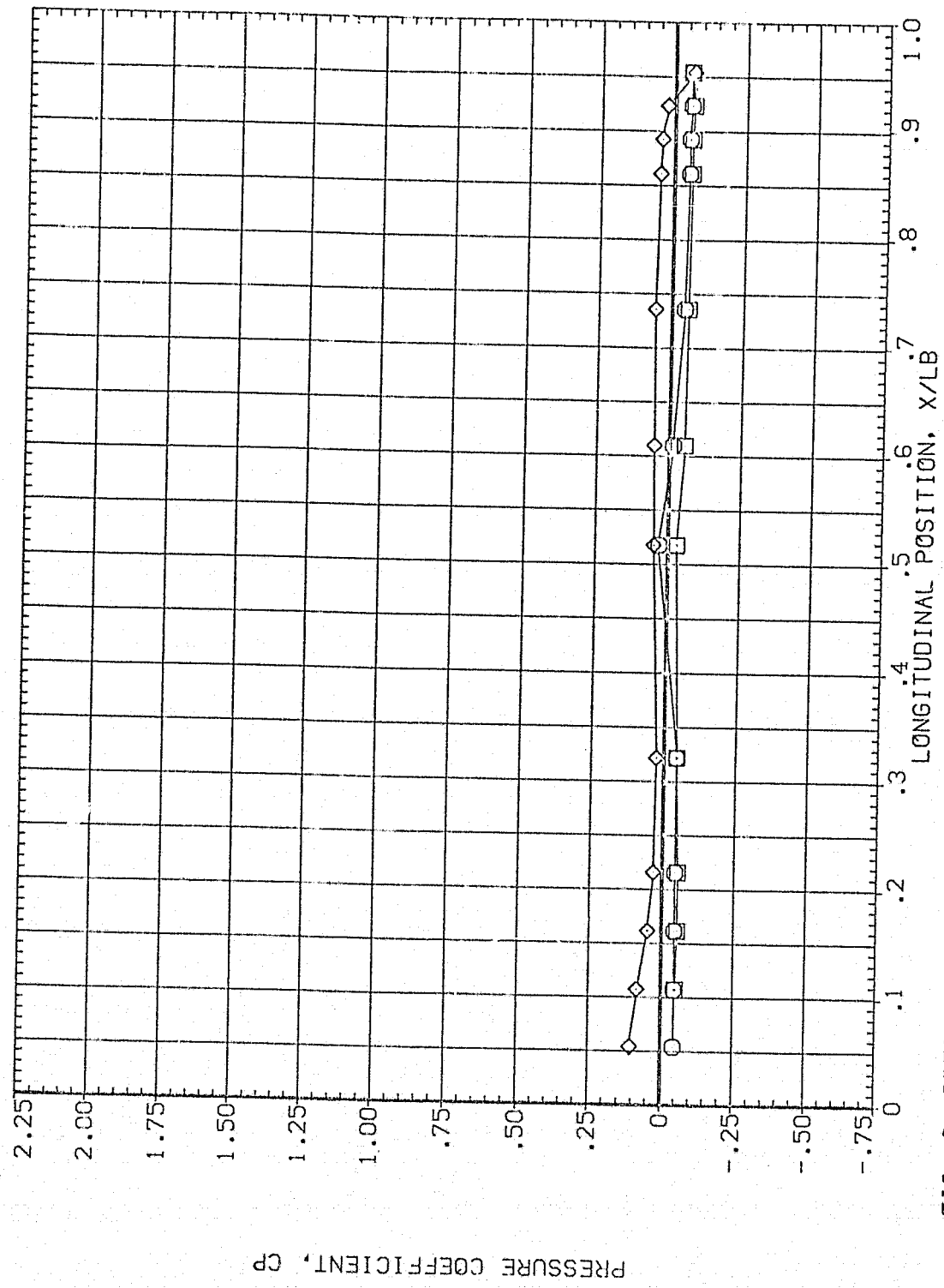


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A069)

SYMBOL	THETA		ALPHA		MACH		BETA		PARAMETRIC VALUES	
	112.500	135.000	71.880	71.880	3.480	3.480	MOUNT	.000	OFFSET	80.000
○	157.500							2.000	PHI	.000
□										
◇										

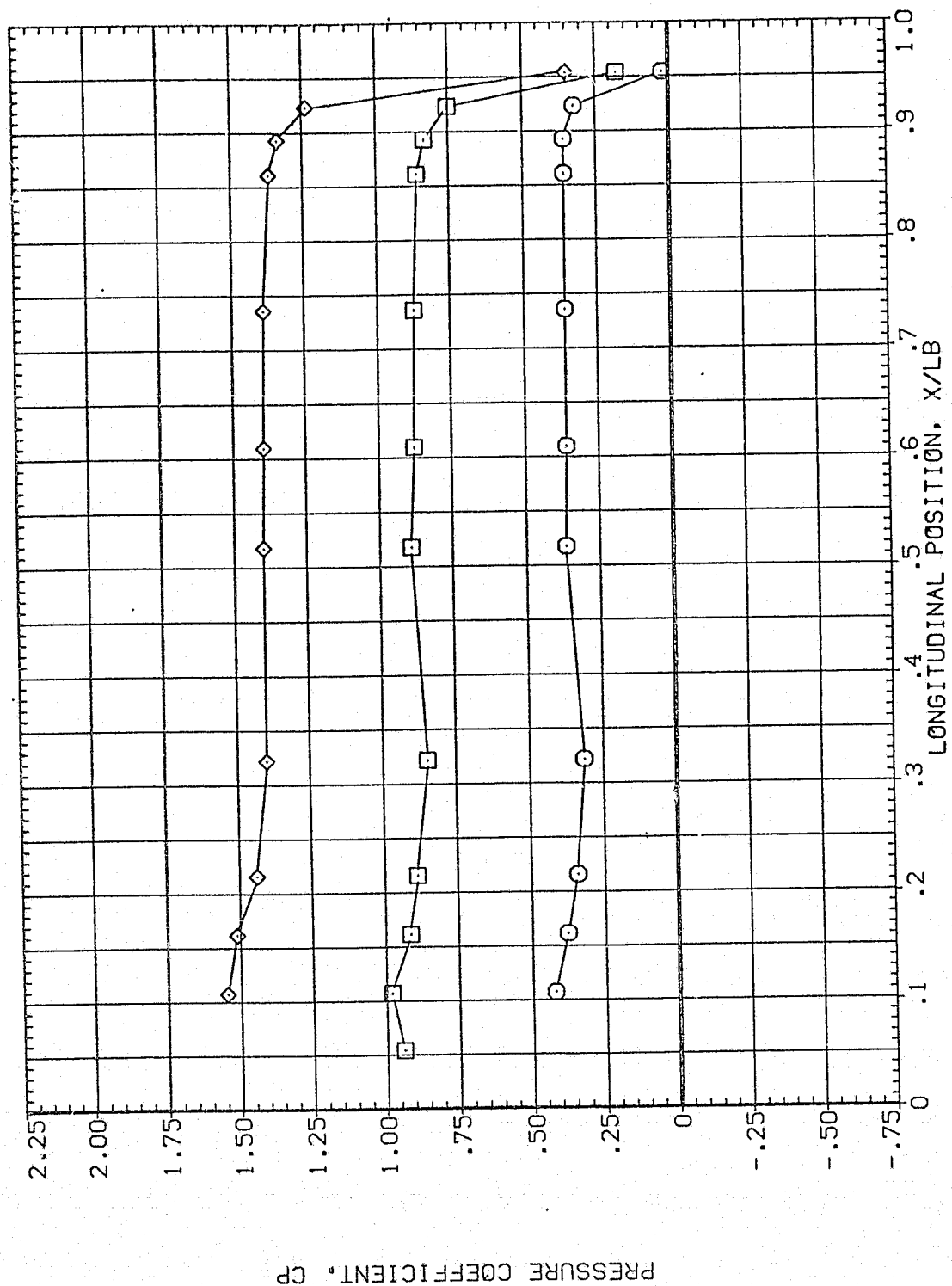


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	PARAMETRIC VALUES		
	THETA	ALPHA	HACH
○	180.000	71.880	3.480
□	202.500		
◇	225.000		
		BETA	80.000
		OUNT	.000
		PHI	.000

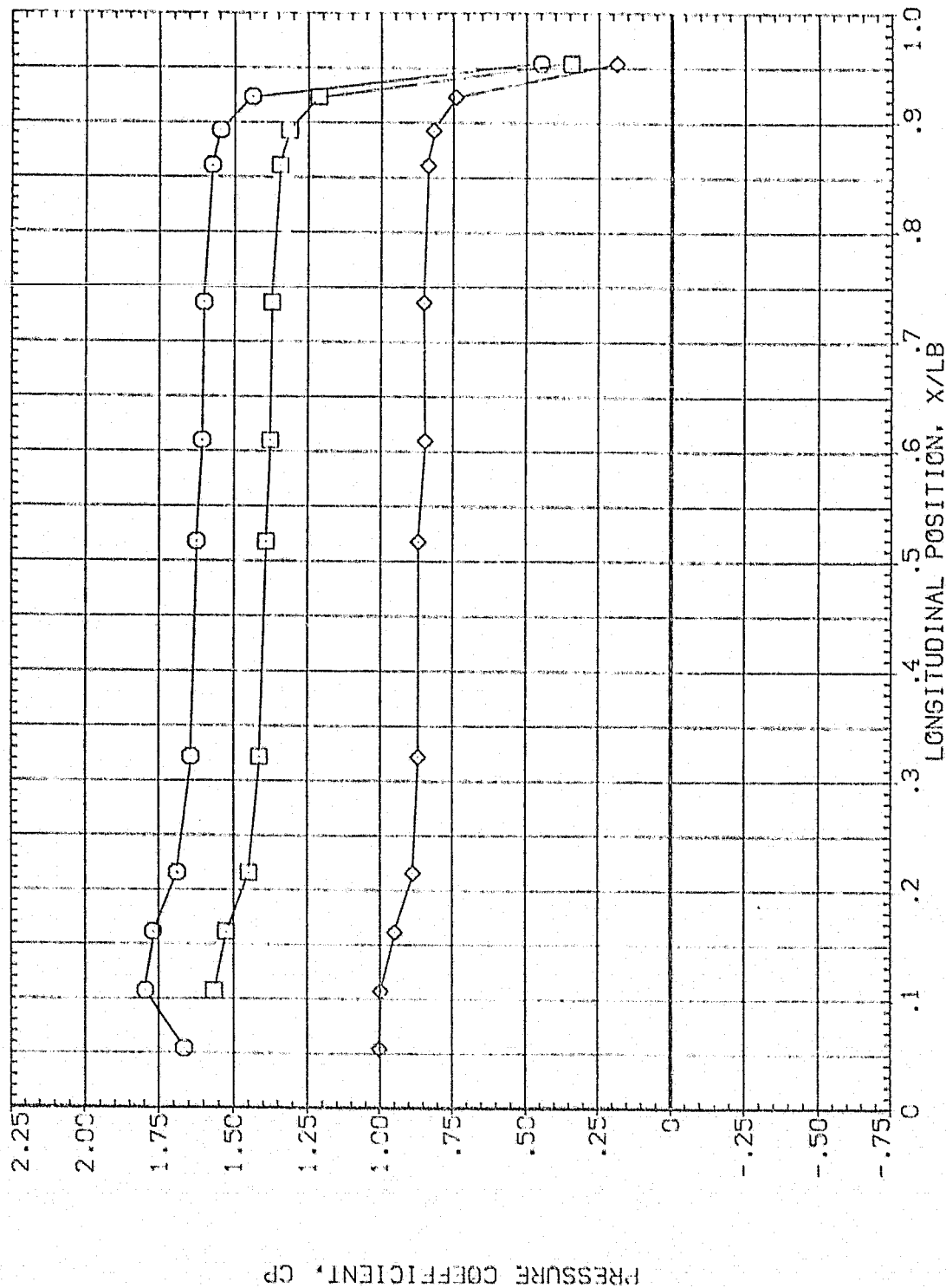


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A069)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	71.880	3.480	.000	.000	.000
□	279.000			2.000		
◇	292.500					

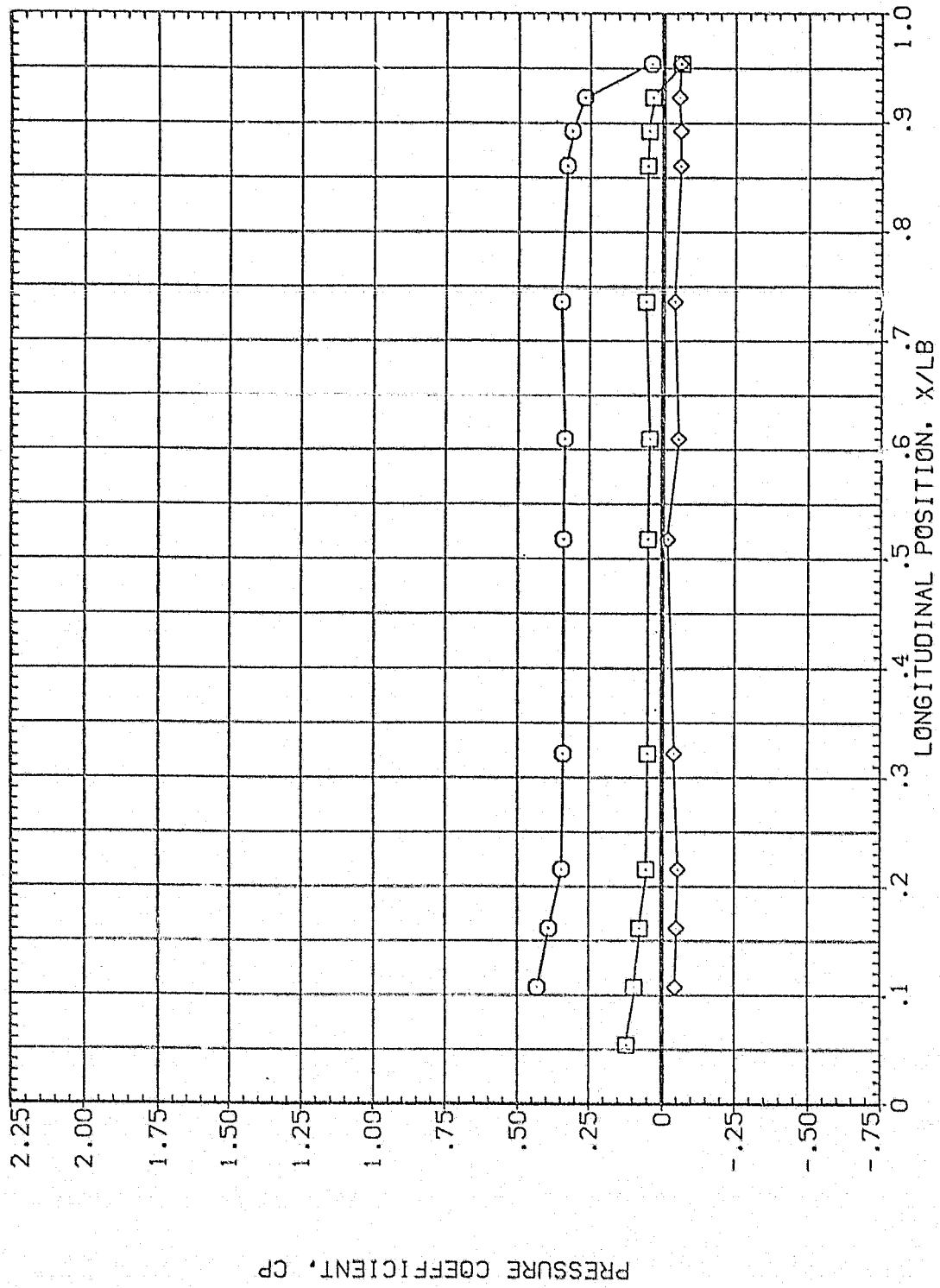


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T2 (P1A069)

PARAMETRIC VALUES
 .000 OFFSET
 2.000 PHI
 80.000
 .000

BETA
 MOUNT

MACH
 3.480

ALPHA
 71.880

Y-ETA
 315.000
 325.000
 345.000

SW201
 010
 010

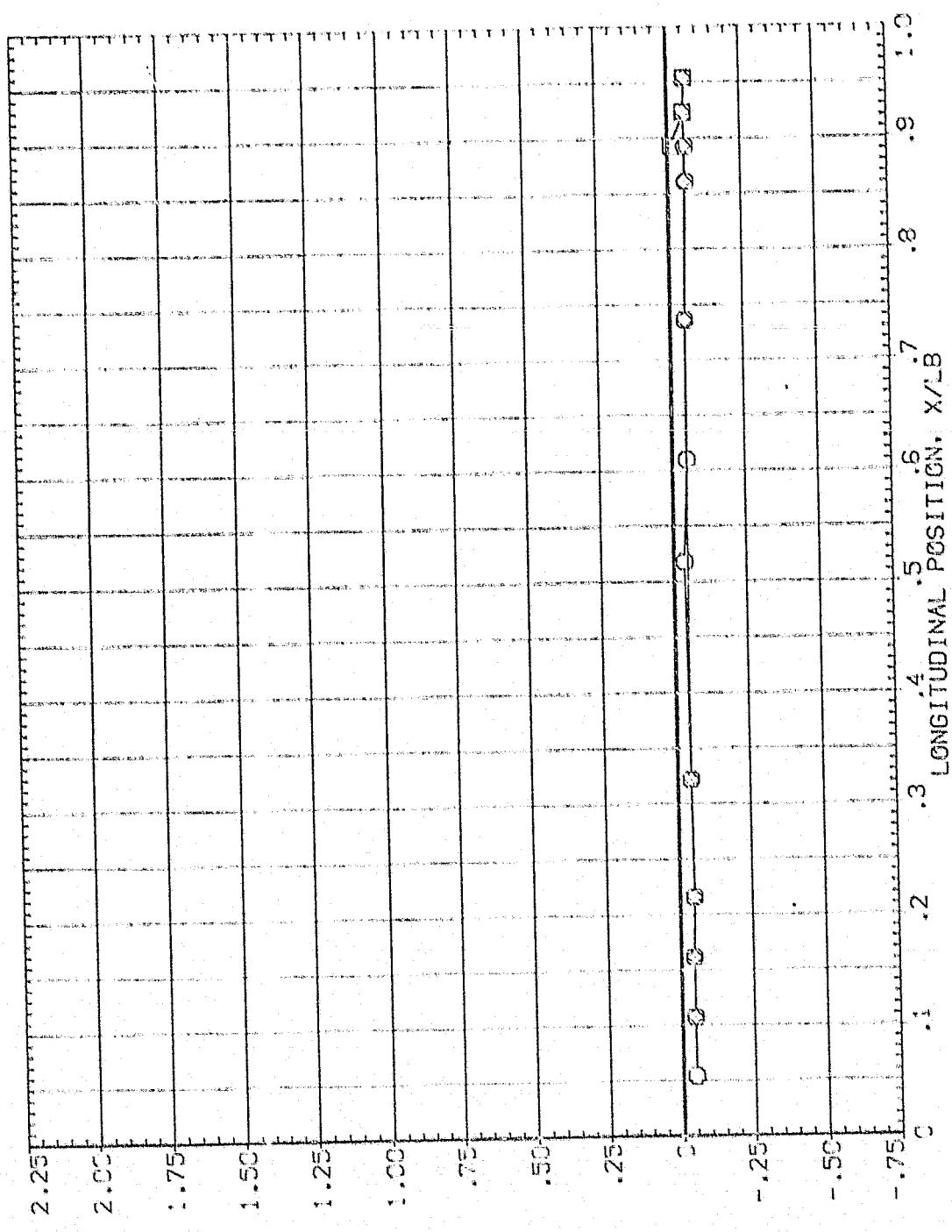


FIG. 8 PRESSURE DISTRIBUTION OVER ET - 12 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.000	74.860	3.480	MOUNT	.000 OFFSET
□	14.000				2.000 PHI
◇	24.000				80.000

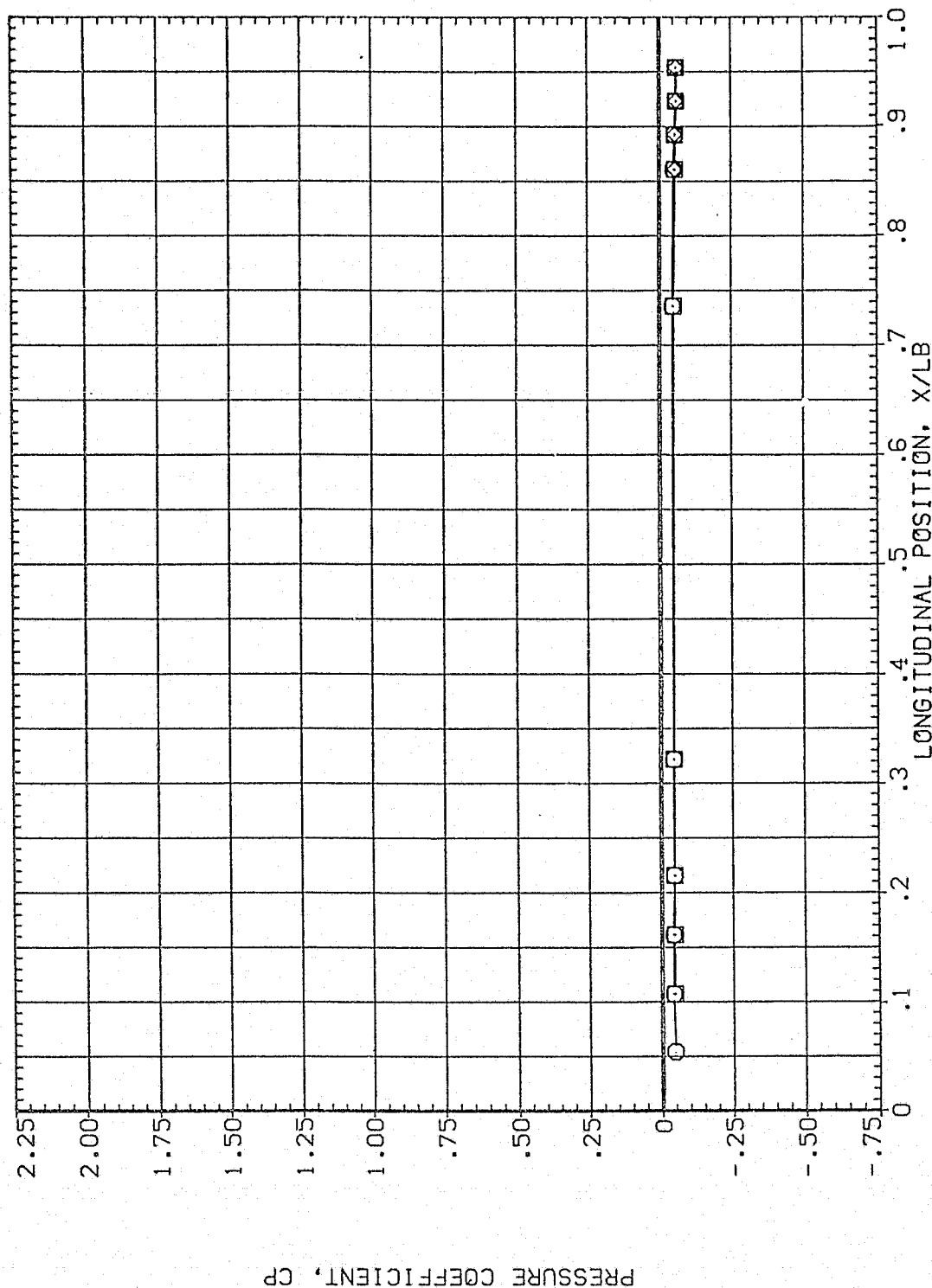


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
 ○
 □
 ◇

THETA
 45.000
 67.500
 90.000

ALPHA
 74.860

MACH
 3.480

BETA
 MOUNT

PARAMETRIC VALUES
 .000 .000 .000
 2.000 2.000 2.000
 PHI 80.000 .000

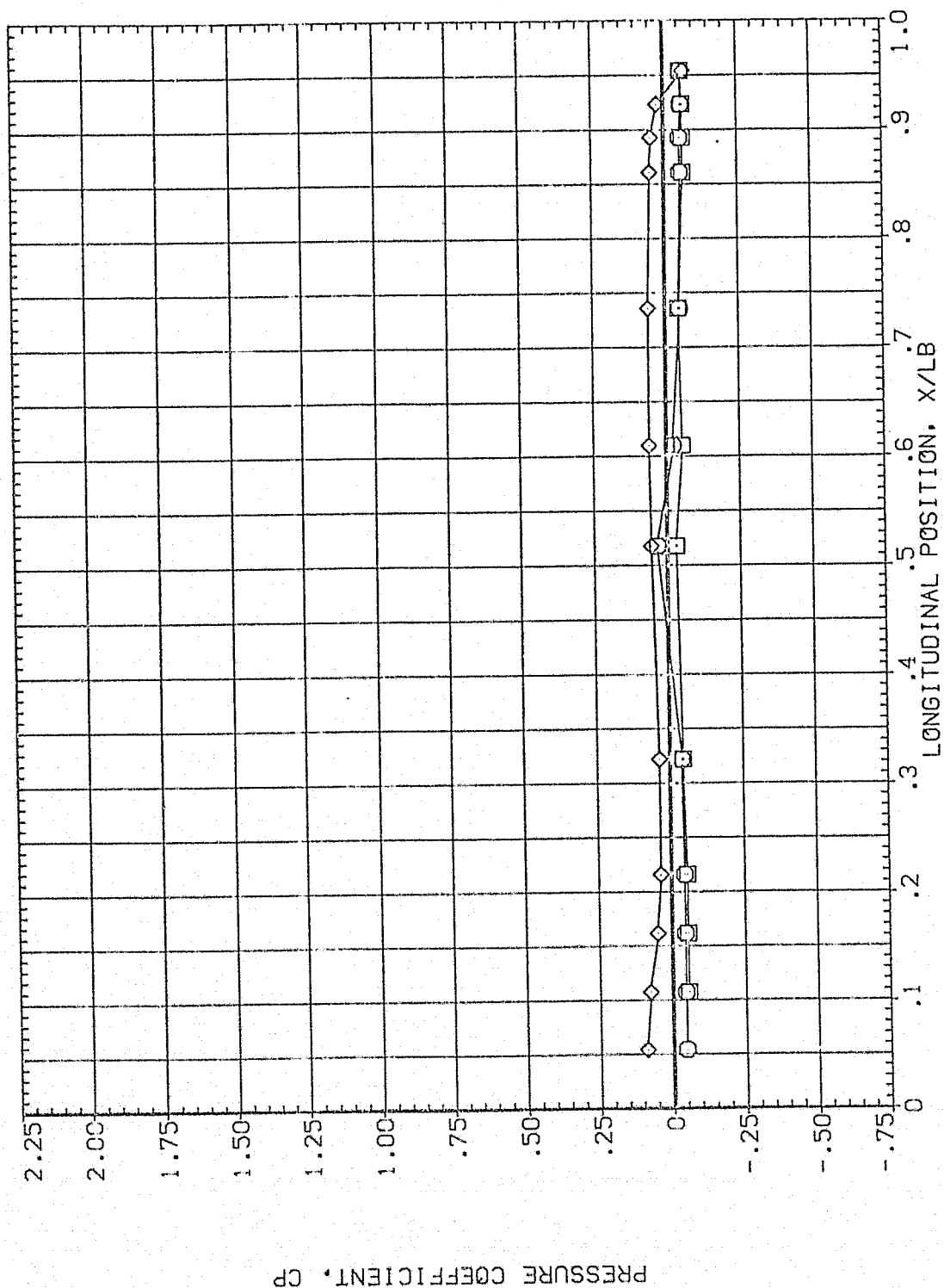


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (1A-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	112.500	135.000	74.860	74.860	3.480	3.480	BETA	.000	OFFSET	80.000
○							MOUNT	2.000	PHI	.000
□										
◇										

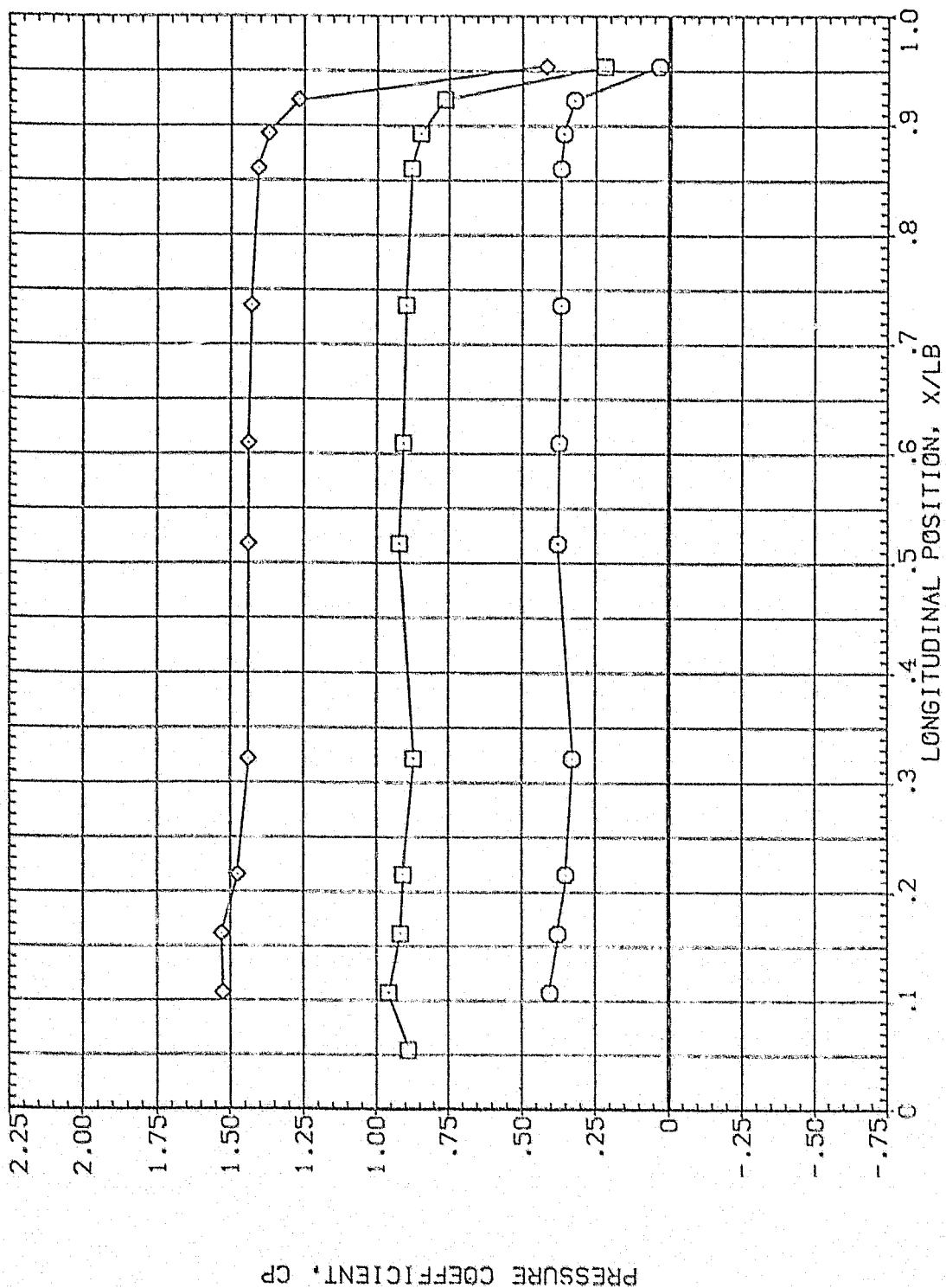


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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PARAMETRIC VALUES
 .000 OFFSET
 2.000 PHI
 80.000
 .000

BETA
 MOUNT

ALPHA
 74.860
 MACH
 3.480

SYMBOL
 180.000
 202.500
 225.000

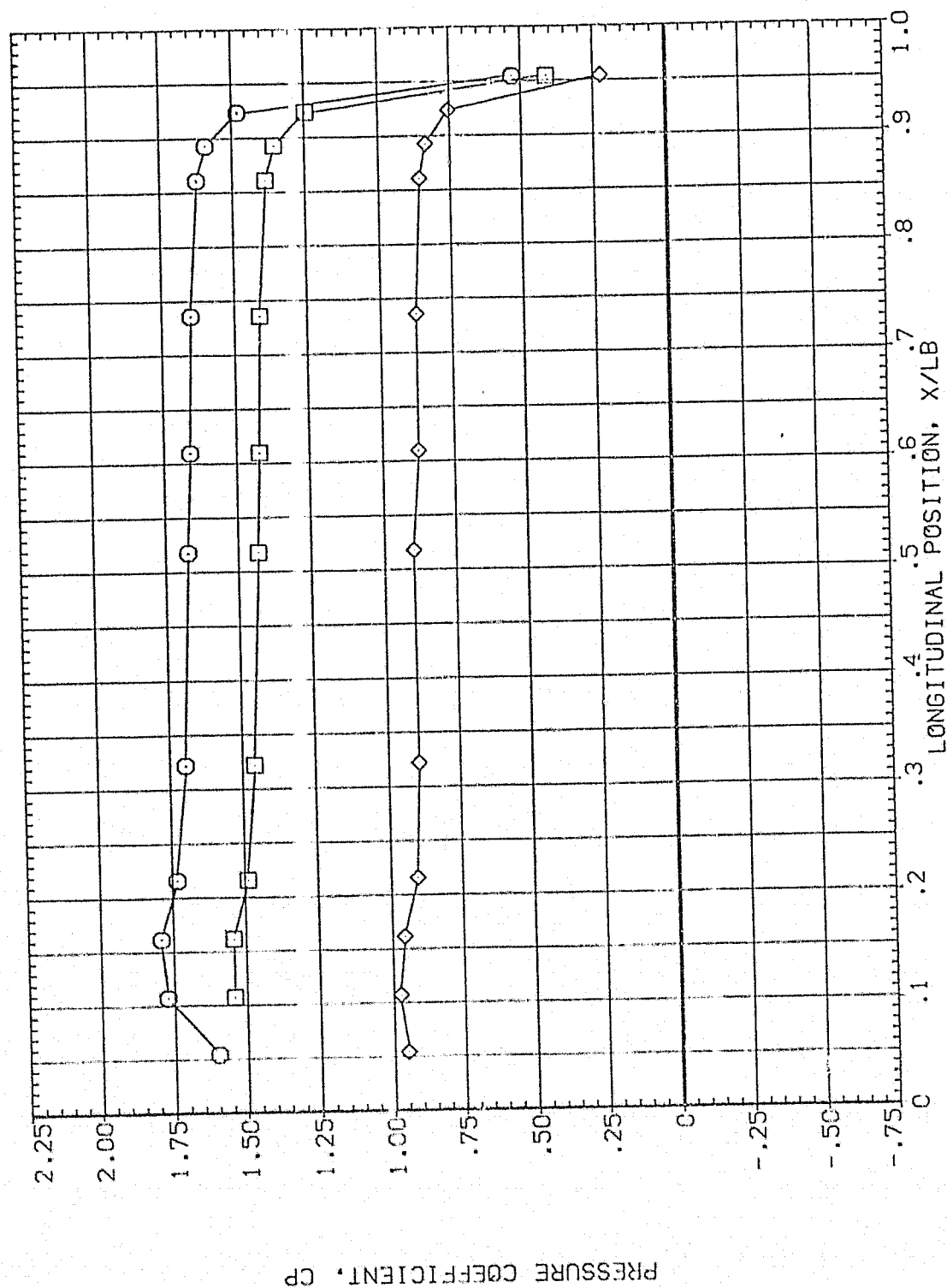


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	74.860	3.480	MOUNT	.000
□	270.000				2.000
◇	292.500				80.000
					PHI
					.000

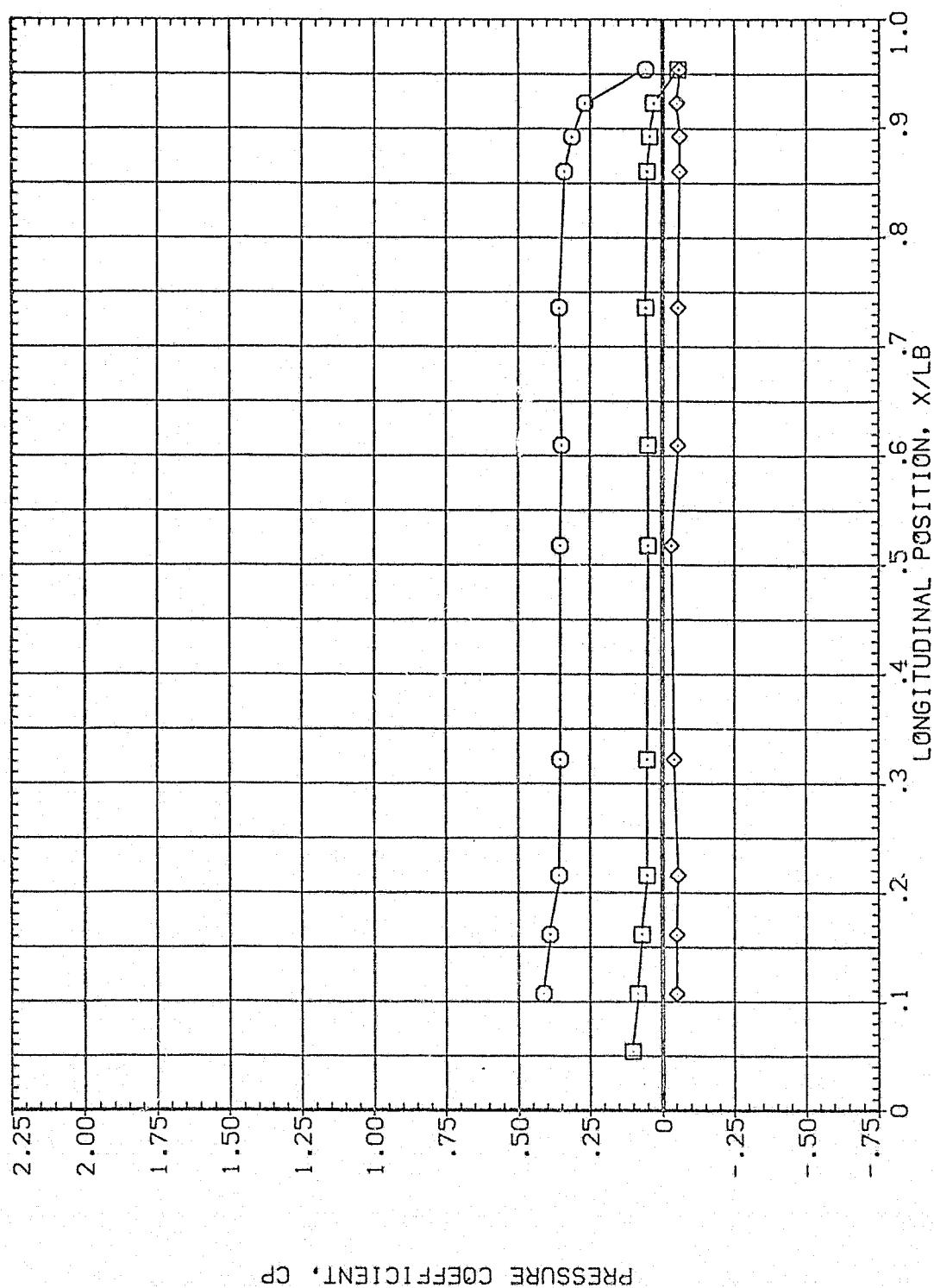


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL THETA ALPHA MACH
 ○ 315.000 74.860 3.480
 □ 325.000
 ◇ 346.000

PARAMETRIC VALUES
 BETA .000 OFFSET 80.000
 MOUNT 2.000 PHI .000

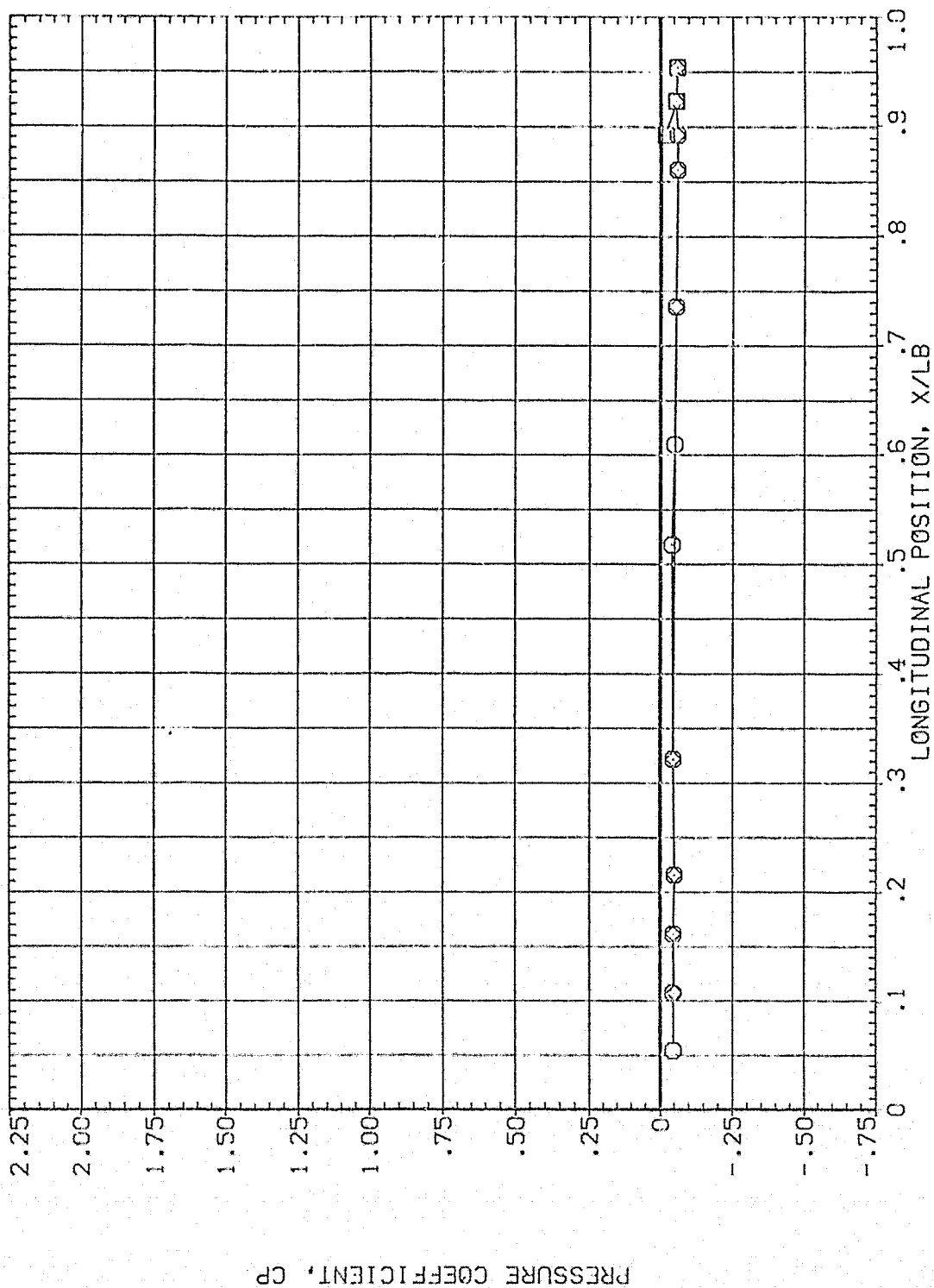


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL

THETA
14.000
24.000

ALPHA
77.880

MACH
3.480

(P1A071)

PARAMETRIC VALUES
BETA
HOUNT

2.000
80.000
PHI
.000

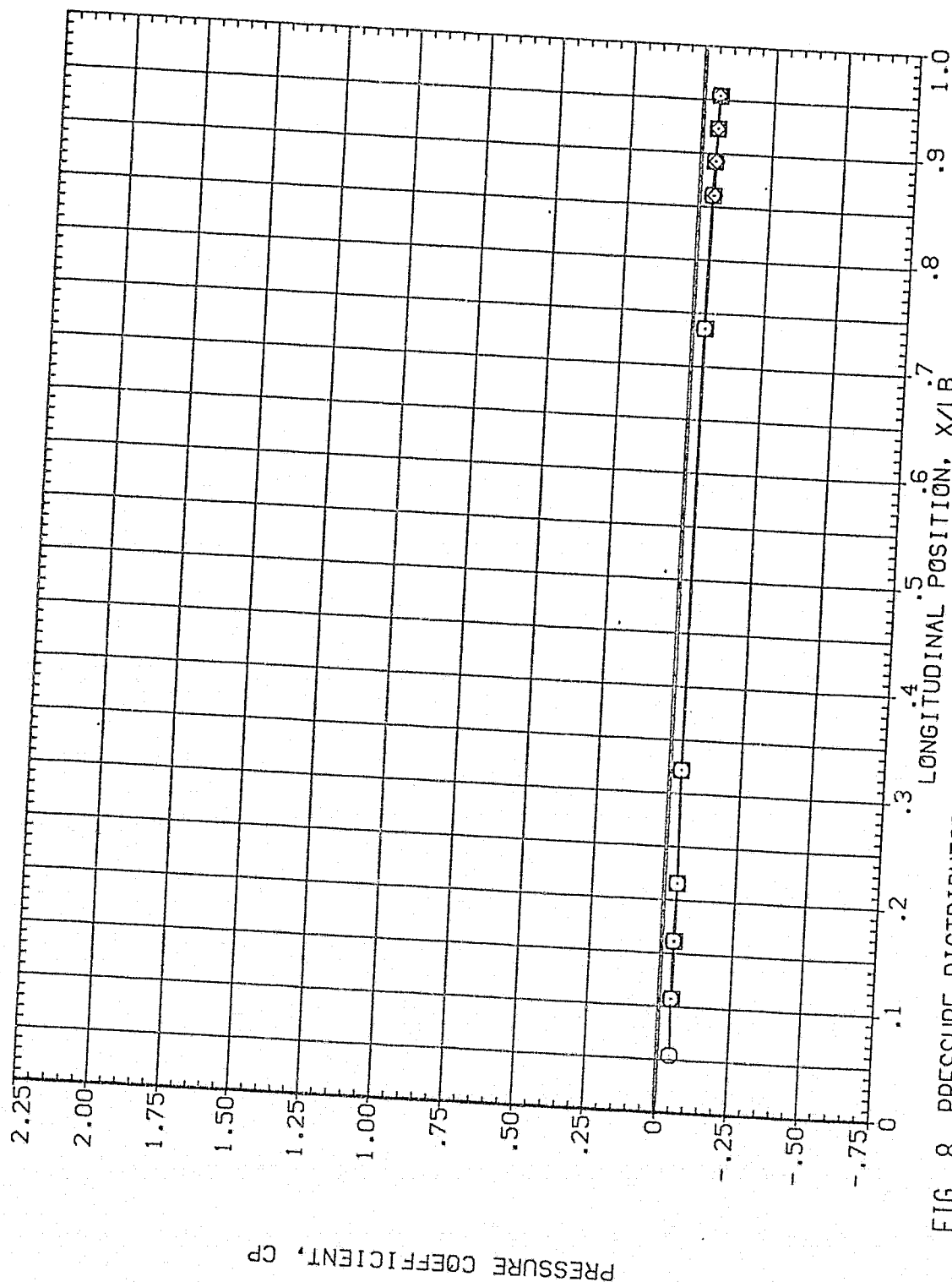


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	77.880	3.480	HOUNT	.000 OFFSET
□	67.500				2.000 PHI
◇	90.000				80.000 .000

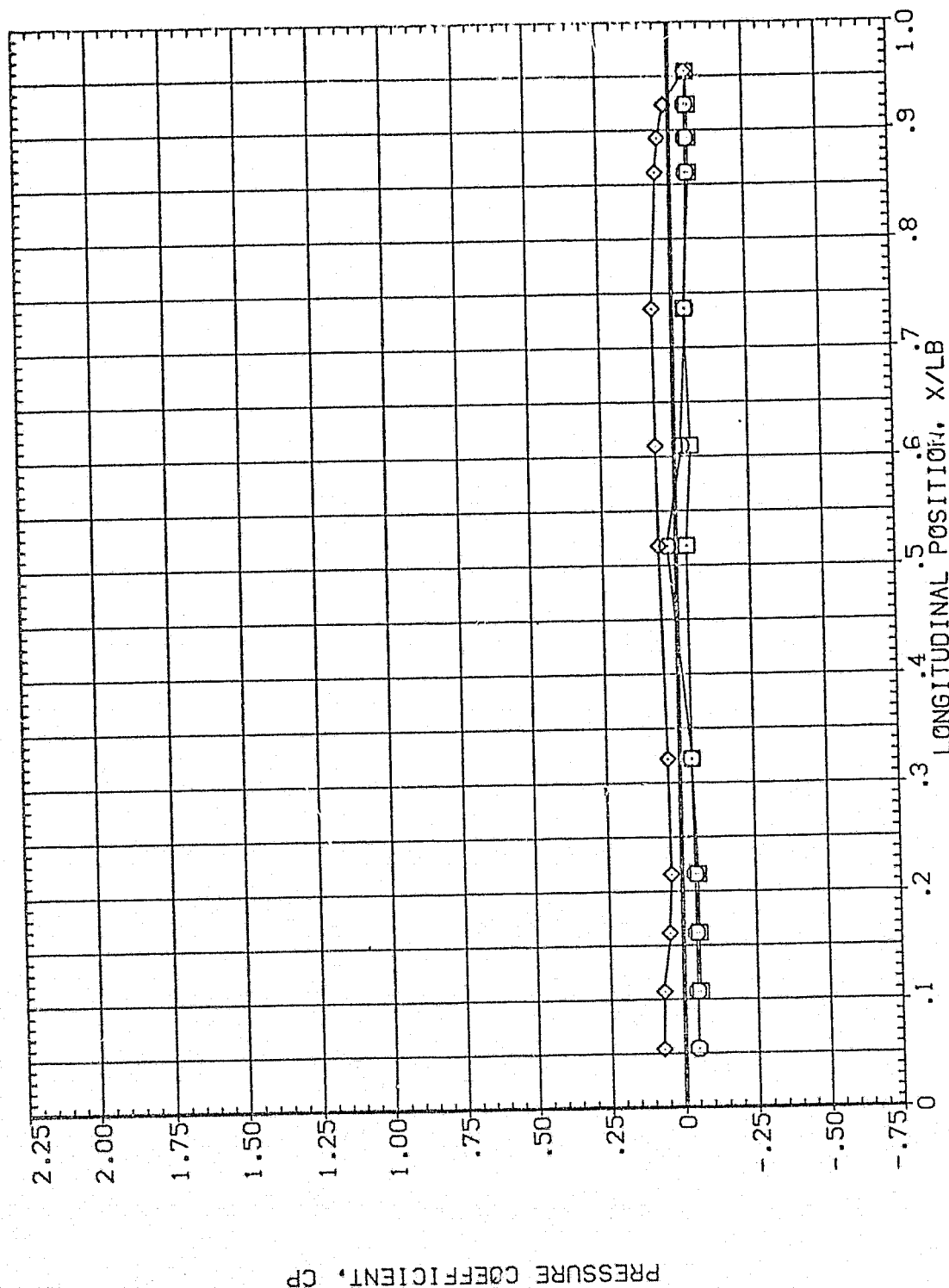


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

PARAMETRIC VALUES
 BETA .000
 HOUNT 2.000
 OFFSET PHI 80.000
 .000

THETA ALPHA MACH
 112.500 77.880 3.480
 135.000
 157.500

SYMBOL
 ○
 □
 ◇

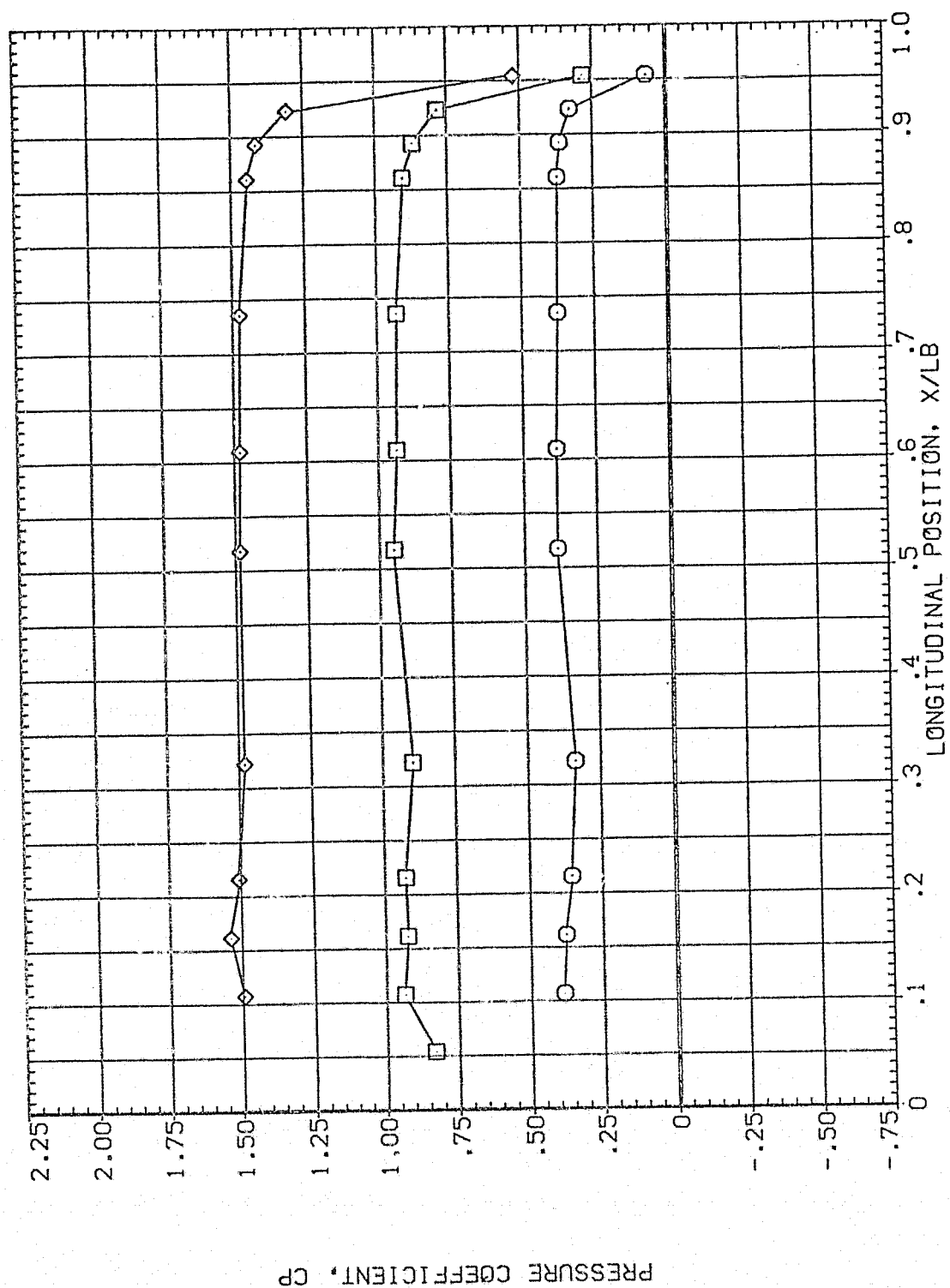


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	77.880	3.480	MOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				80.000

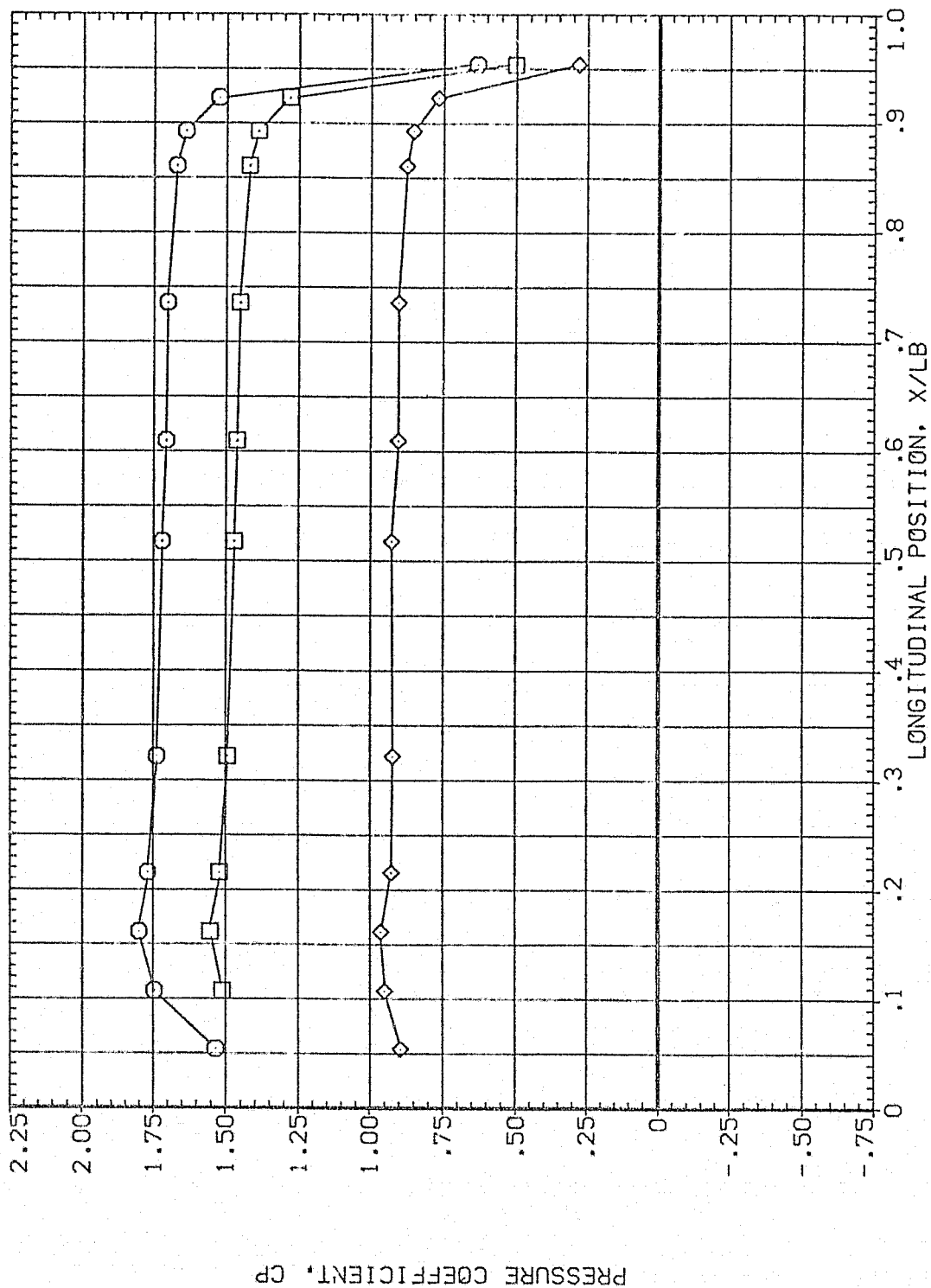


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	77.880	3.480	MOUNT	.000	80.000
□	270.000				2.000	
◇	292.500					

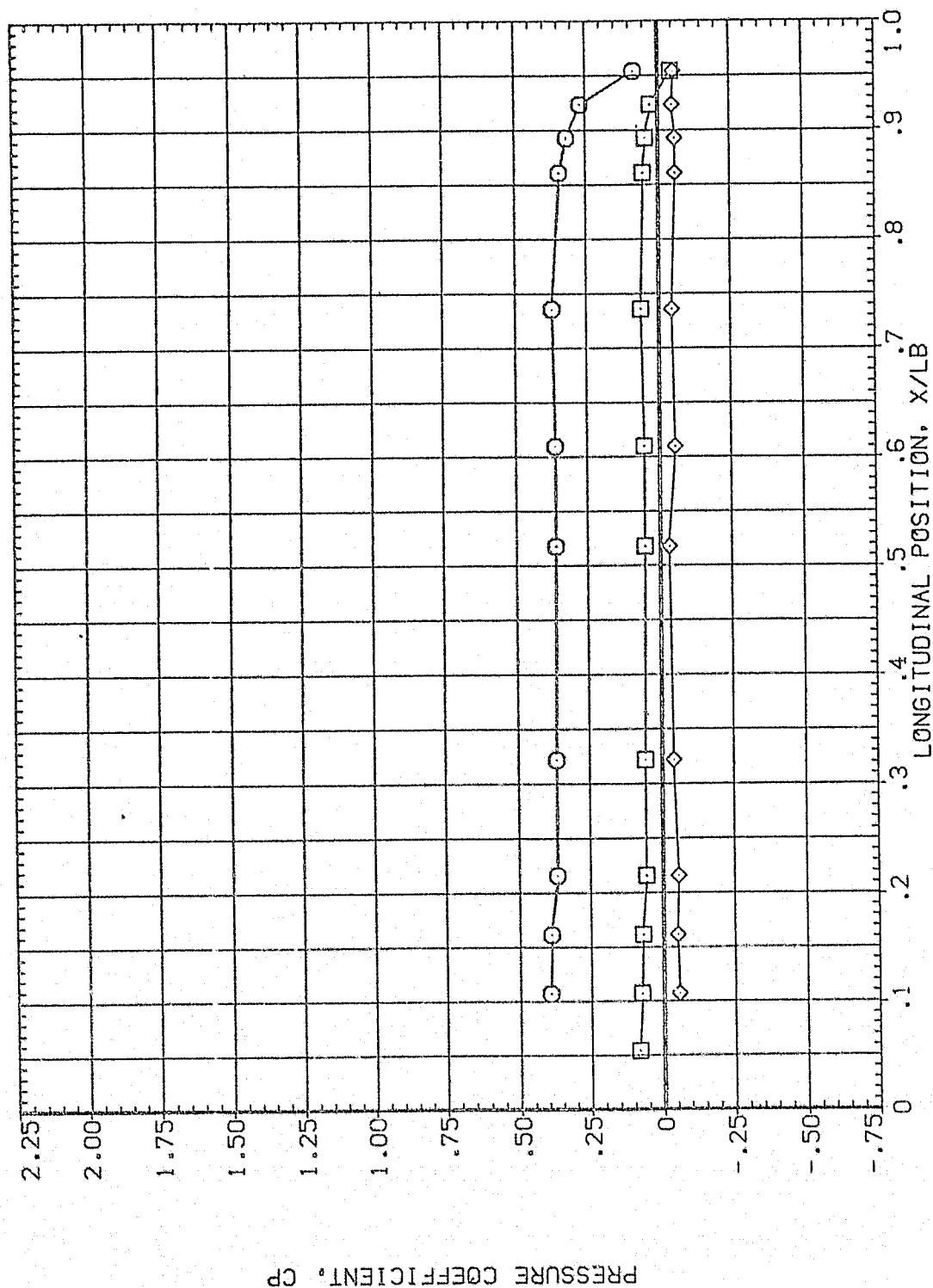


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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SYMBOL	THEIA	ALPHA	MACH	BETA	PARAMETRIC VALUES	9C-000
◇	315.000	77.880	3.480	MOUNT	.000	OFFSET
□	326.000				2.000	PHI
◇	346.000					.000

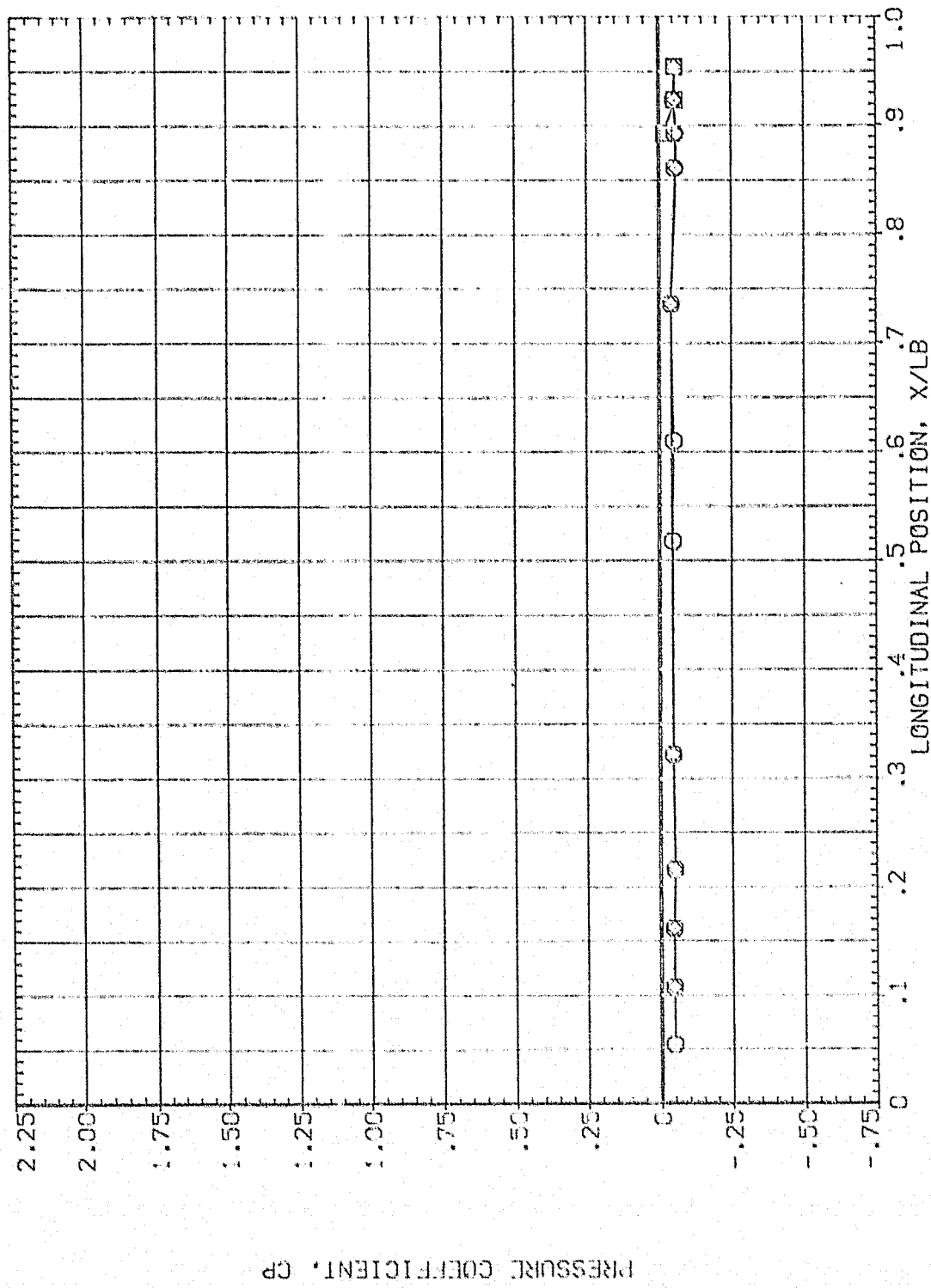


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL	THETA		ALPHA		HACH		BETA		PARAMETRIC VALUES	
	.000	14.000	79.930	3.480	90.000	0.000	2.000	0.000	90.000	0.000
○										
□										
◇										

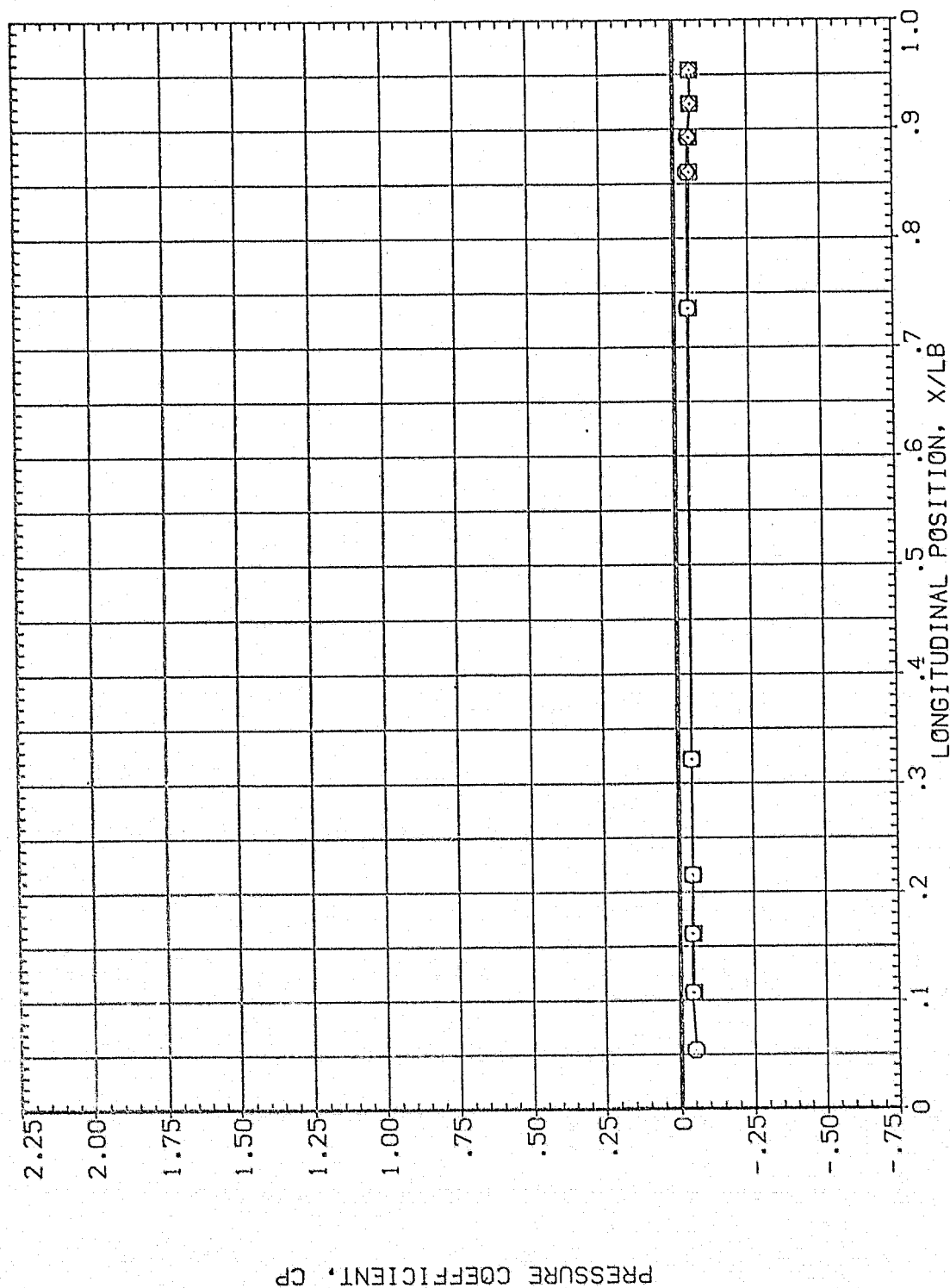


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES		
	45.000	67.500	79.930	90.000	3.480	90.000	BETA	OFFSET	PHI
□							MOUNT	2.000	.000
◇									

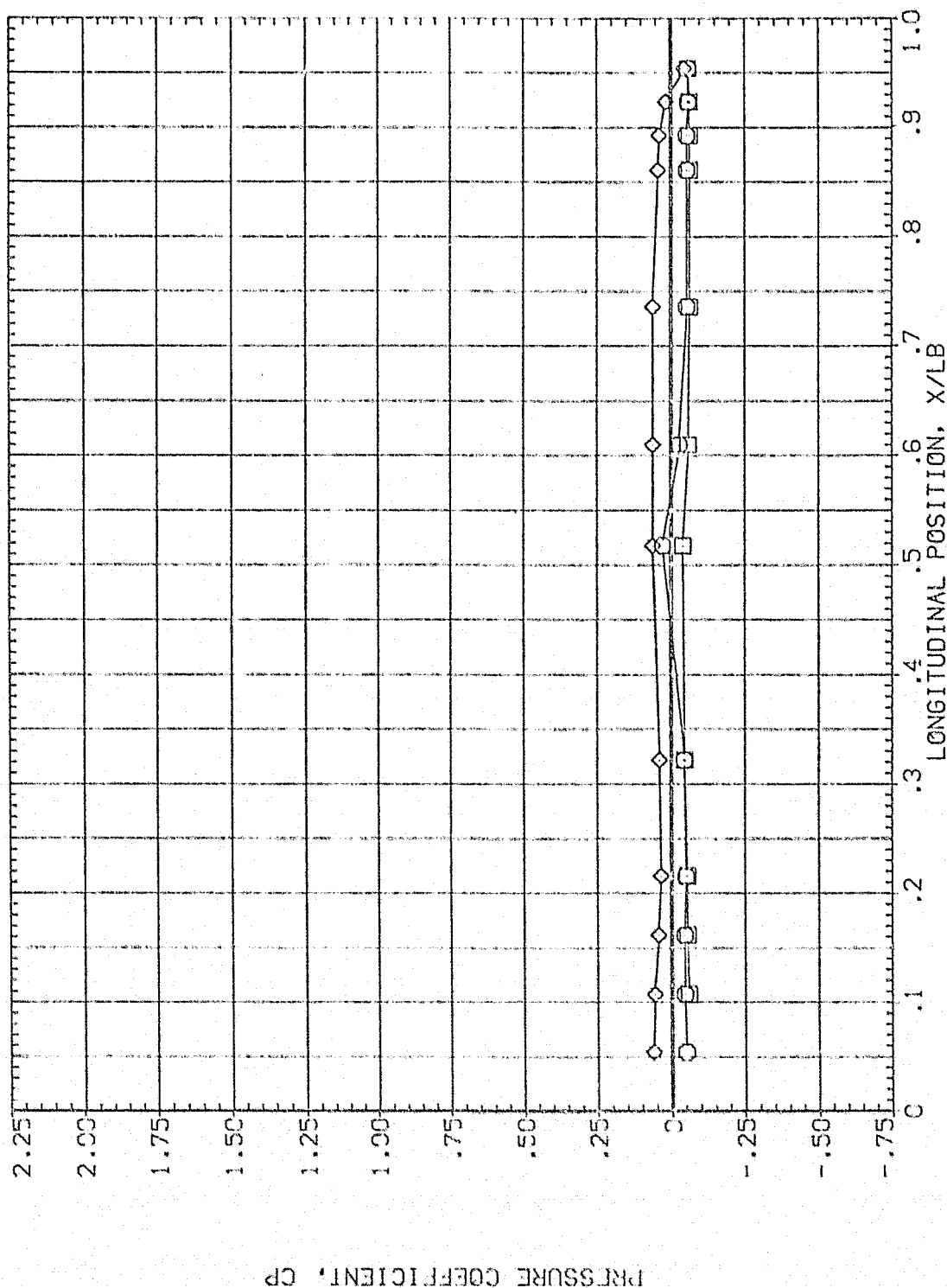


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A072)

SYMBOL

THETA
112.500
135.000
157.500

ALPHA
79.930
MACH
3.480

PARAMETRIC VALUES
BETA
MOUNT
2.000
PHI
90.000
.000

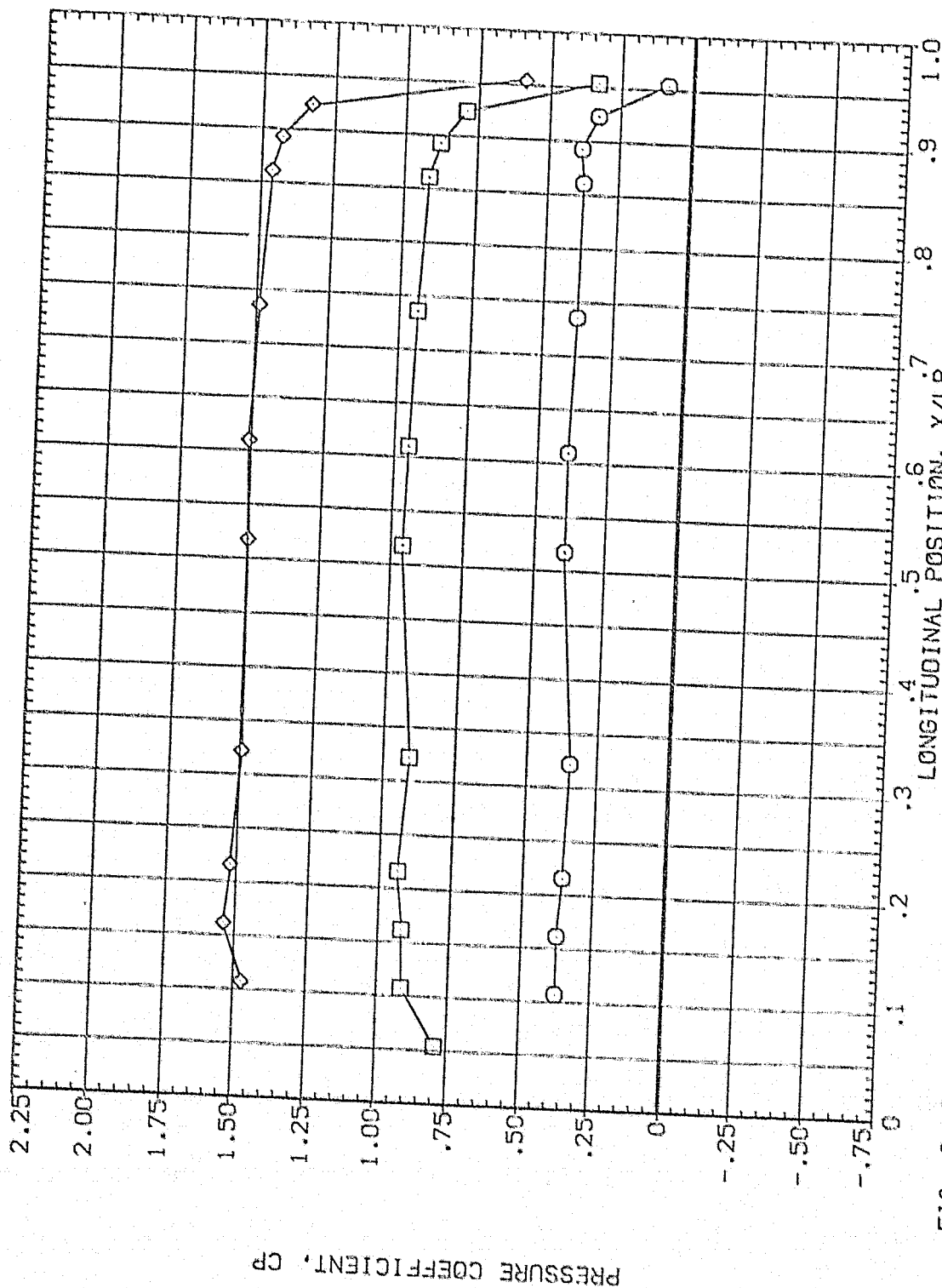


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTRUDANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	79.930	3.480	0.000	0.000
□	202.500			2.000	0.000
◇	225.000			PHI	0.000

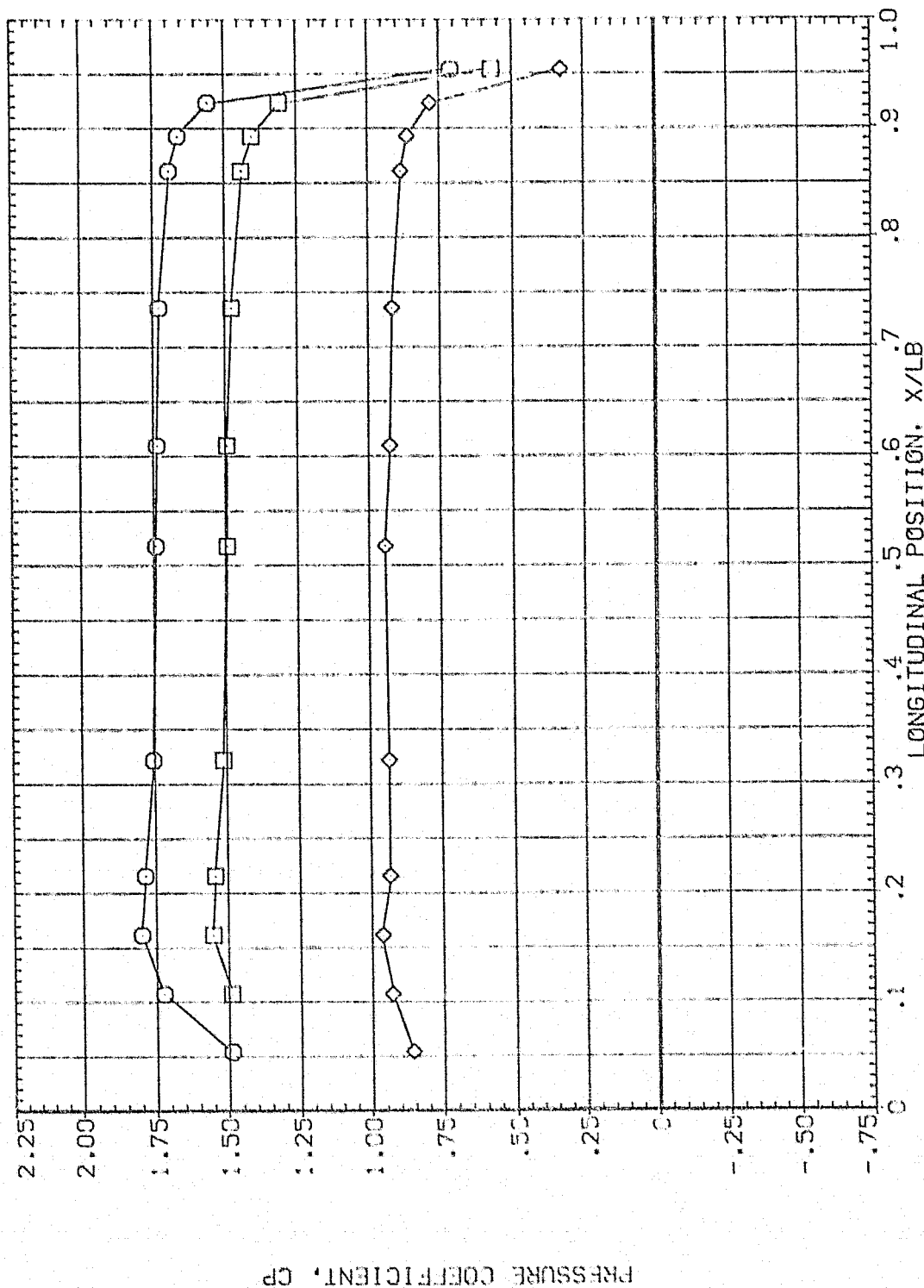


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	73.930	3.480	HEIGHT	.000
□	270.000			OFFSET	.000
◇	292.500			PHI	.000

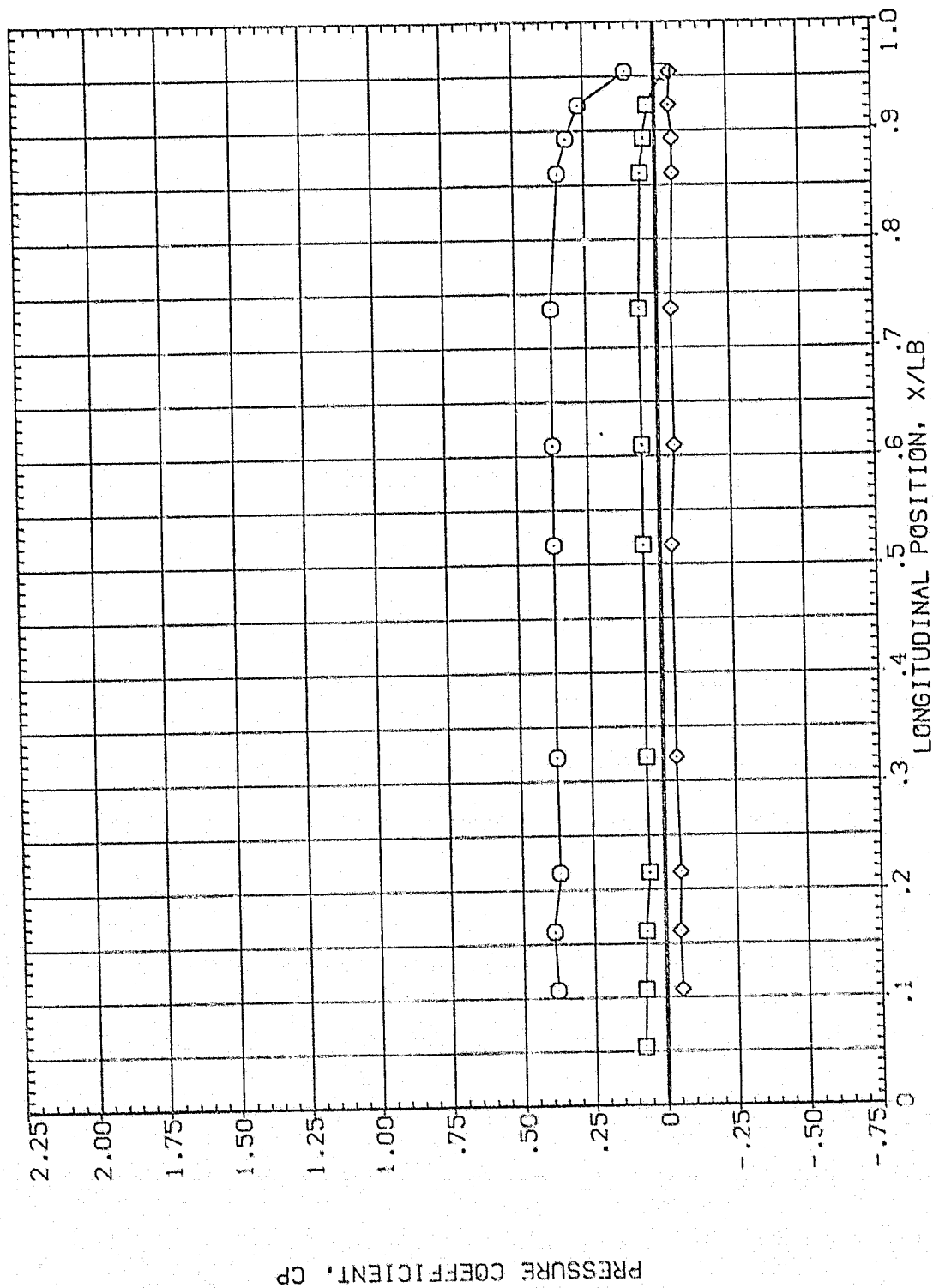


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	79.930	3.480	MOUNT	.000
□	326.000				2.000
◇	346.000				PHI
					90.000
					OFFSET
					.000

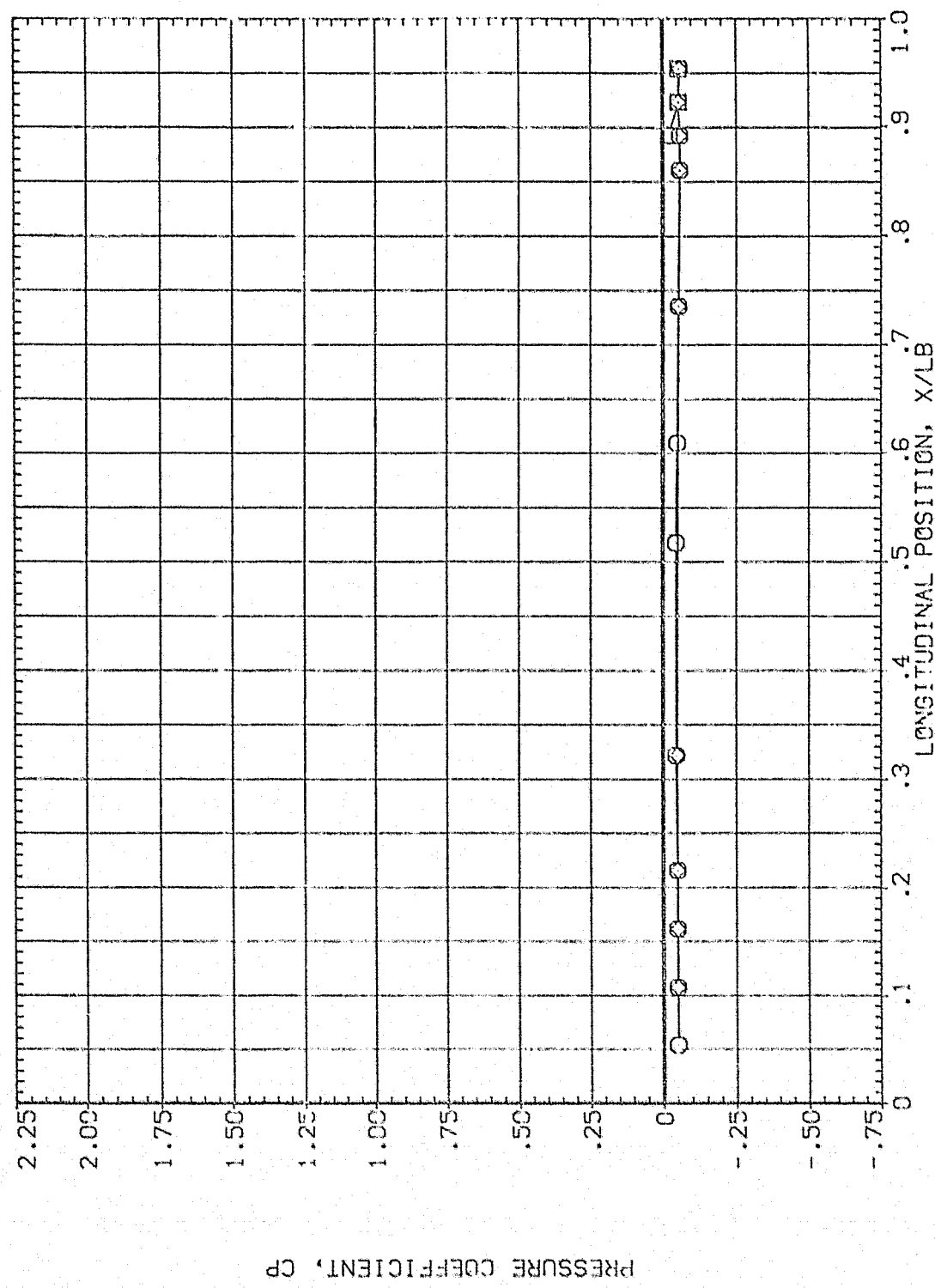


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	.000	14.000	81.330	81.330	3.480	3.480	BETA	OFFSET	PHI	90.000
○							Mount	2.000		.000
◇										

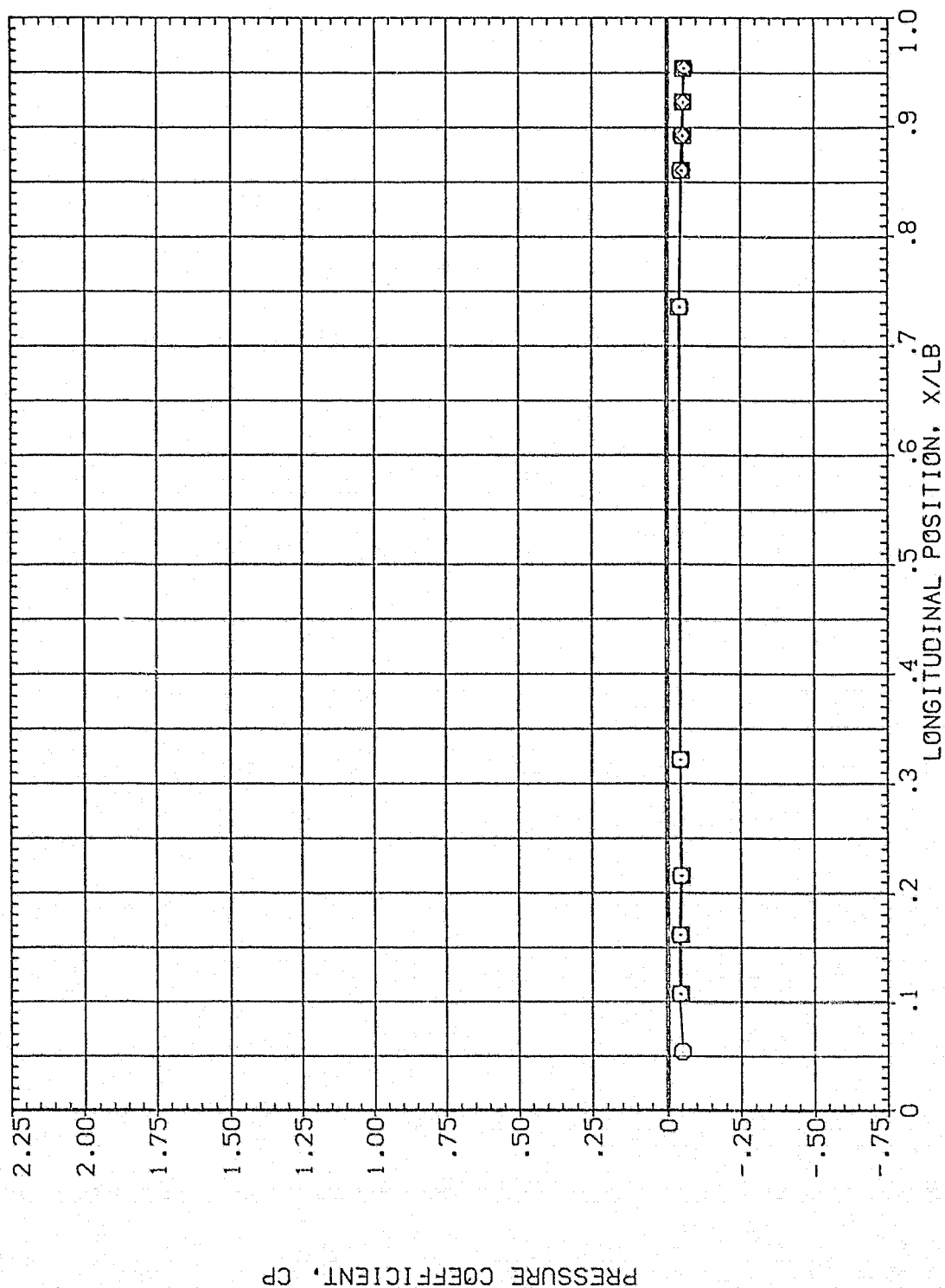


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	81.830	3.480	MOUNT	.000 OFFSET
□	67.500				2.000 PHI
◇	90.000				90.000

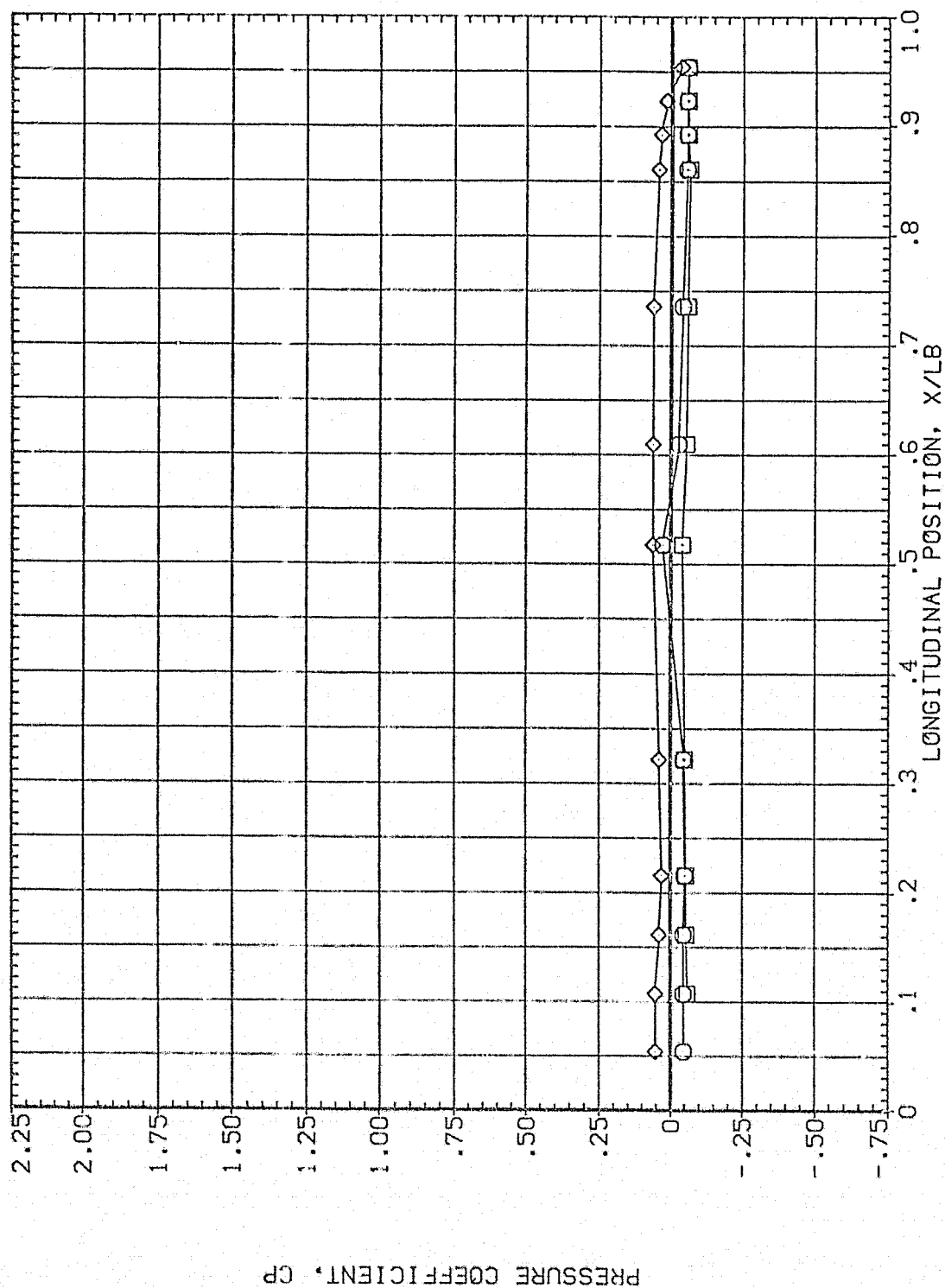


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA MOUNT	OFFSET PHI	90.000 .000
○	112.500	81.830	3.480			
□	135.000					
◇	157.500					

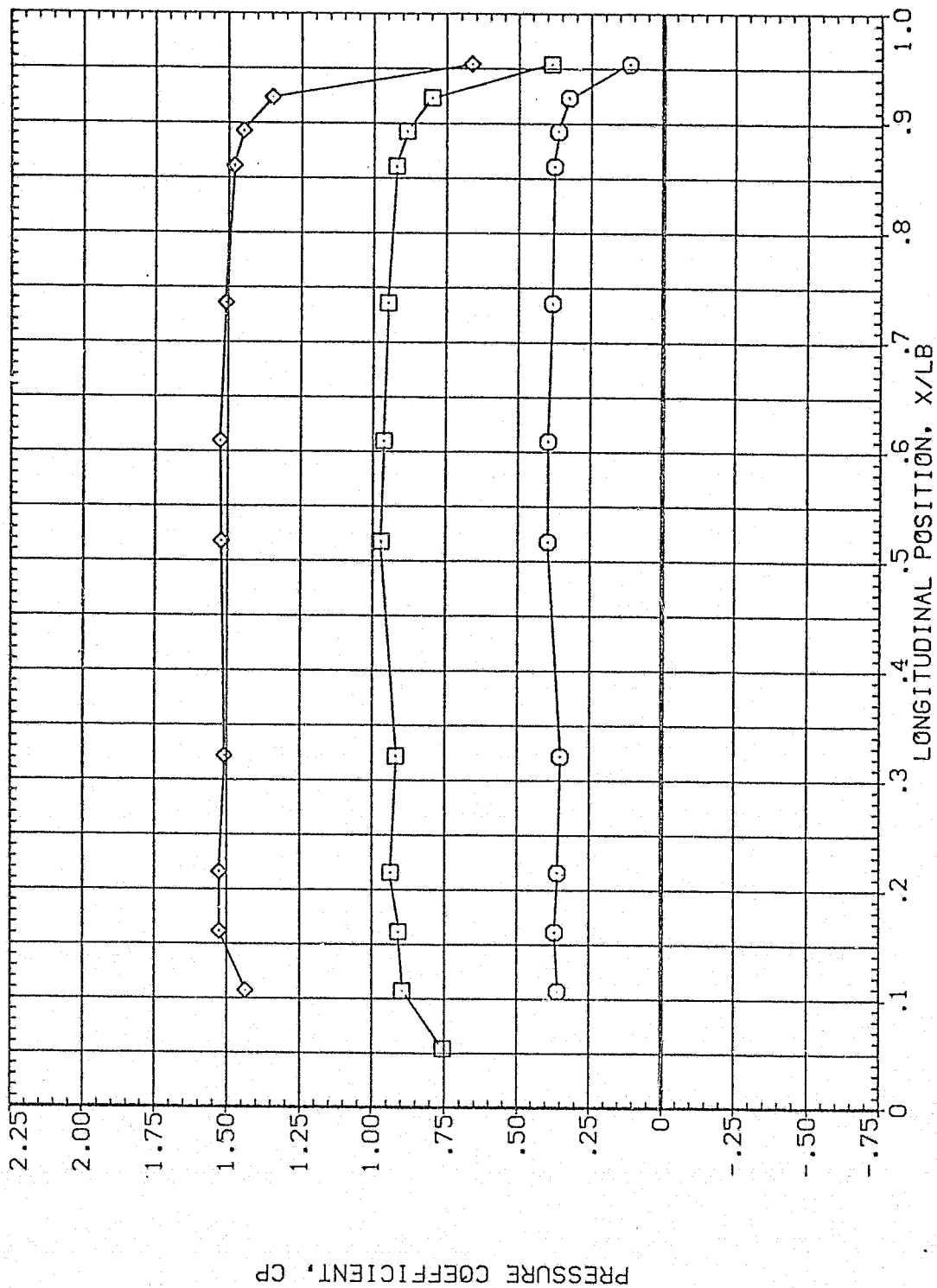


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	81.830	3.480	MOUNT	.000
□	202.500				2.000
◇	225.000				90.000
					OFFSET: .000
					PHI .000

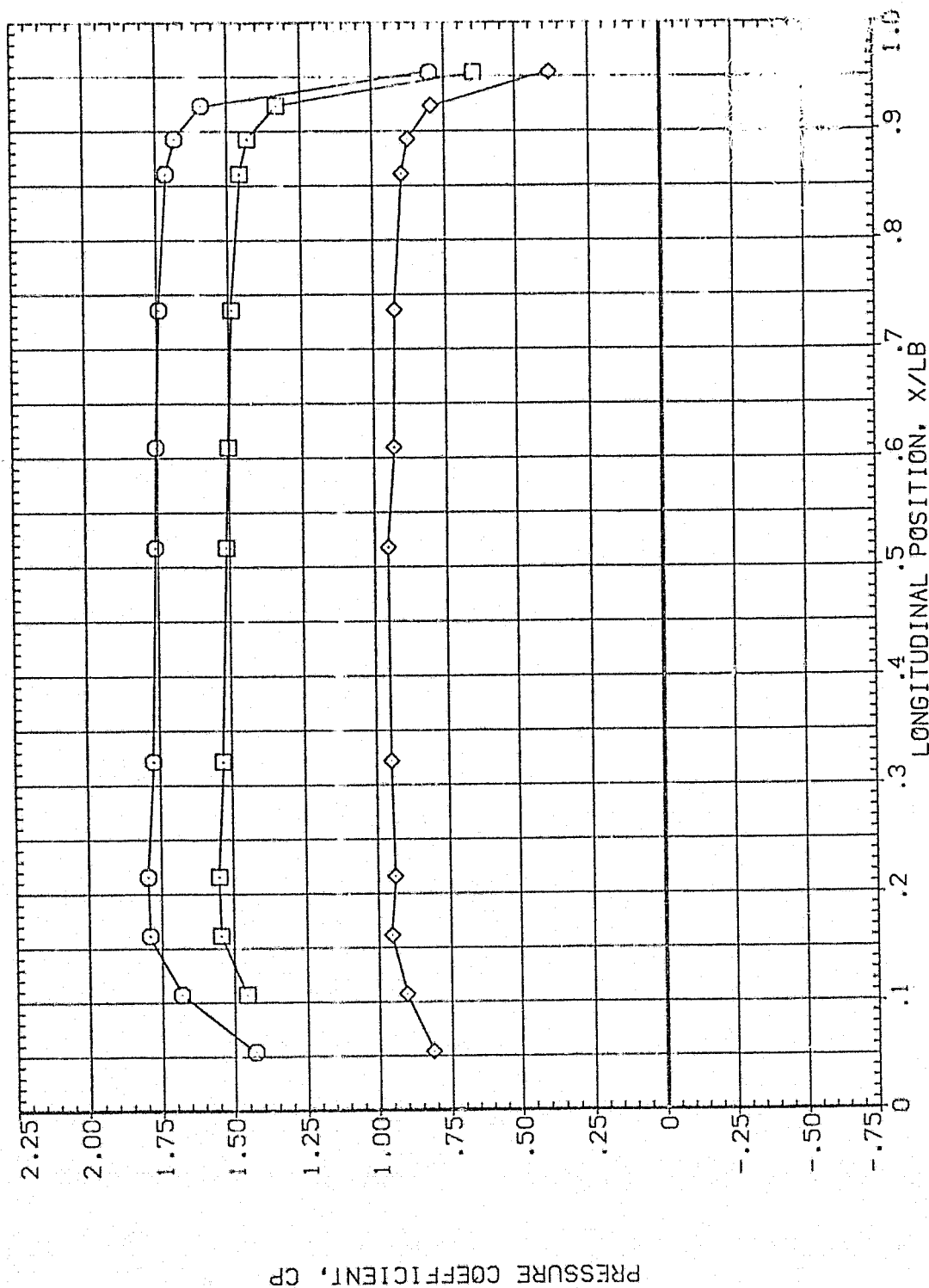


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	247.500	81.830	3.480	PHI	2.000	.000
□	270.000					
◇	292.500					

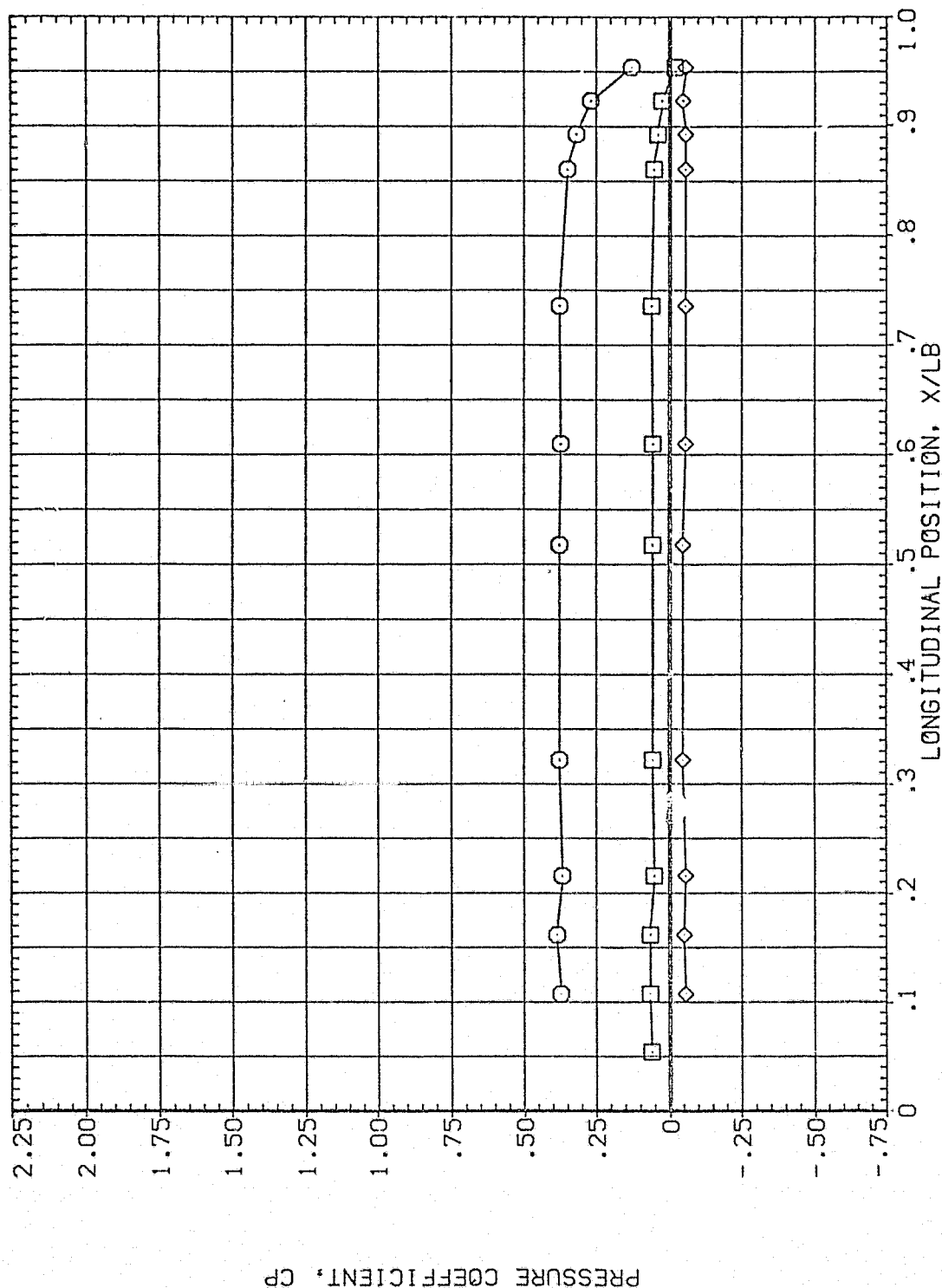


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL THETA ALPHA MACH
 O 315.000 81.830 3.480
 □ 326.000
 ◇ 346.000

PARAMETRIC VALUES
 BETA .000
 HOUNT 2.000
 OFFSET PHI .000

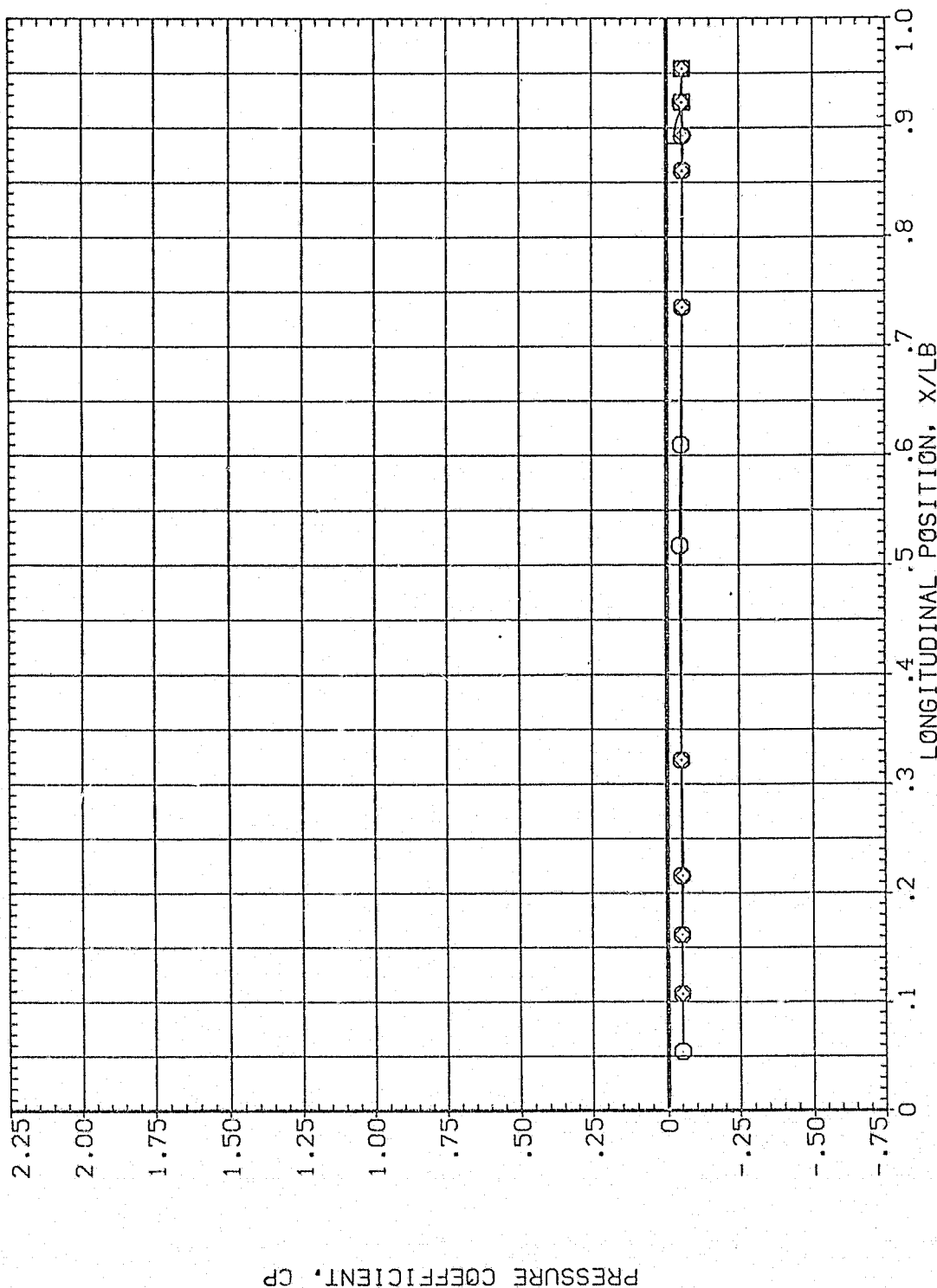


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL
 ○ □ ◇

THETA .000
 ALPHA 84.830
 MACH 3.480

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

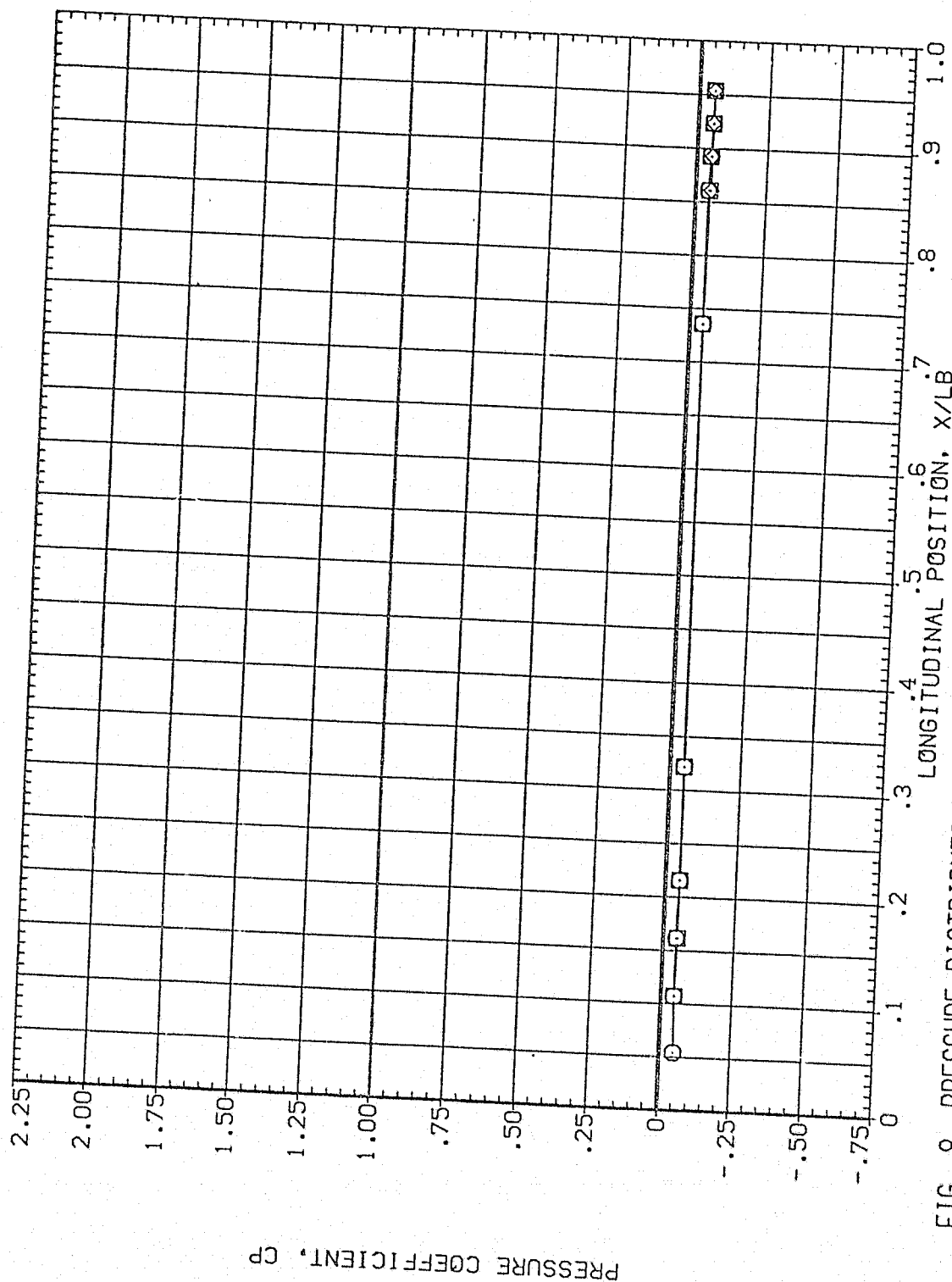


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
◇	45.000	84.830	3.480	MOUNT	.000 OFFSET
□	67.500				2.000 PHI
◇	90.000				50.000

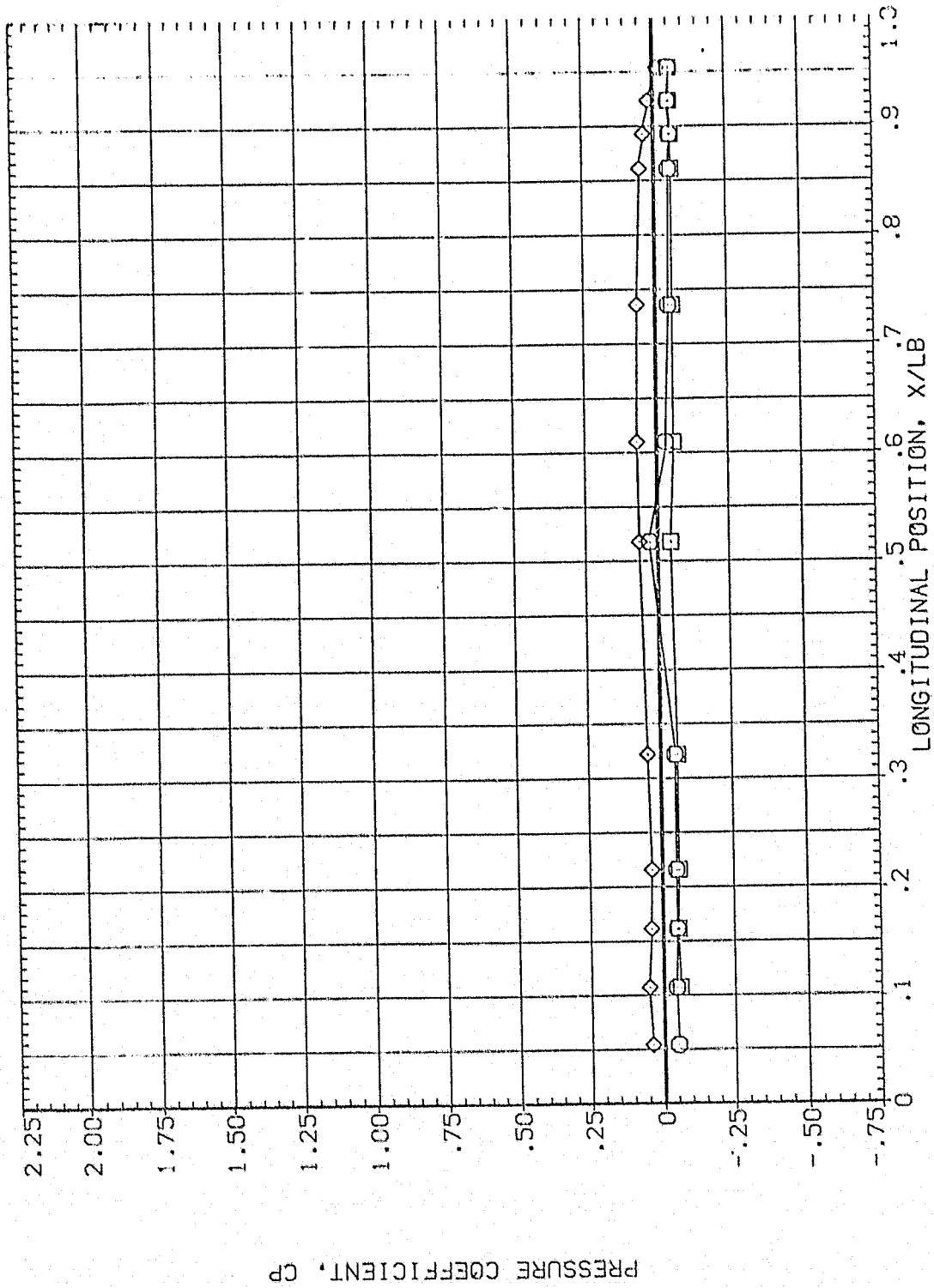


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA MOUNT	OFFSET PHI	90.000 .000
○	112.500	84.830	3.480			
□	135.000					
◇	157.500					

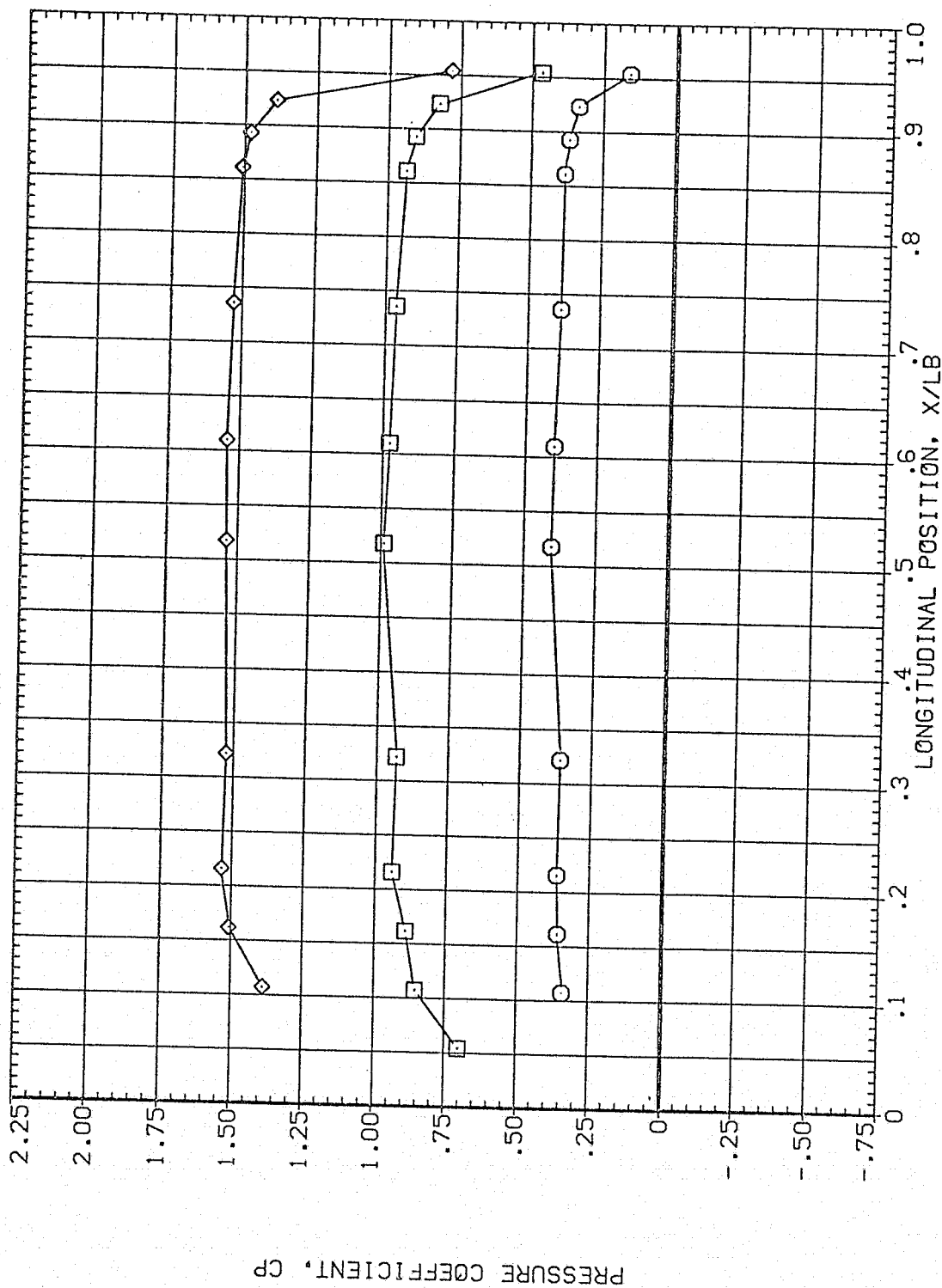


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	84.830	3.480	OUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				90.000

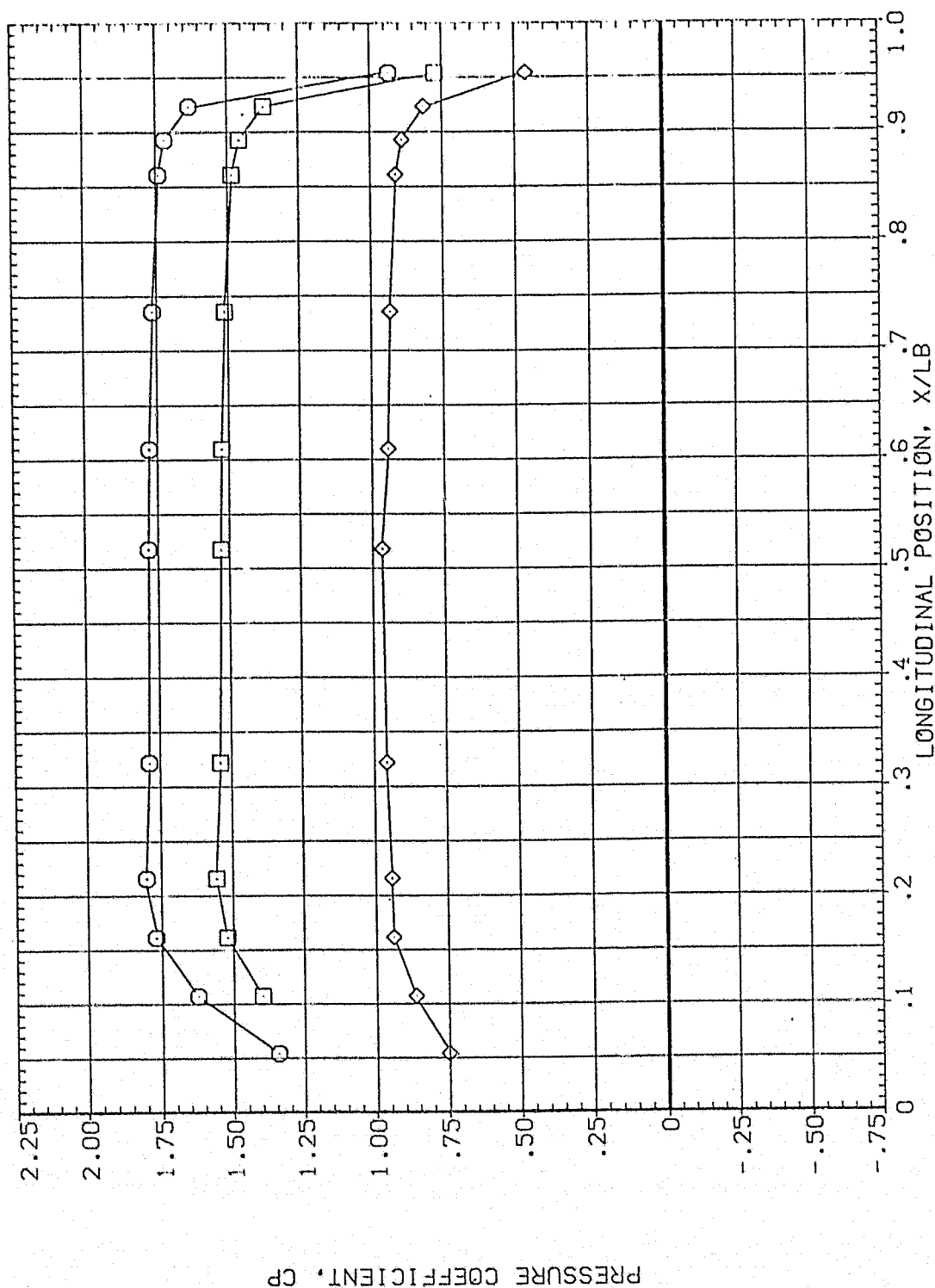


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	84.830	3.480	OUNT	2.000	.000
◇	270.000					.000
◇	292.500					

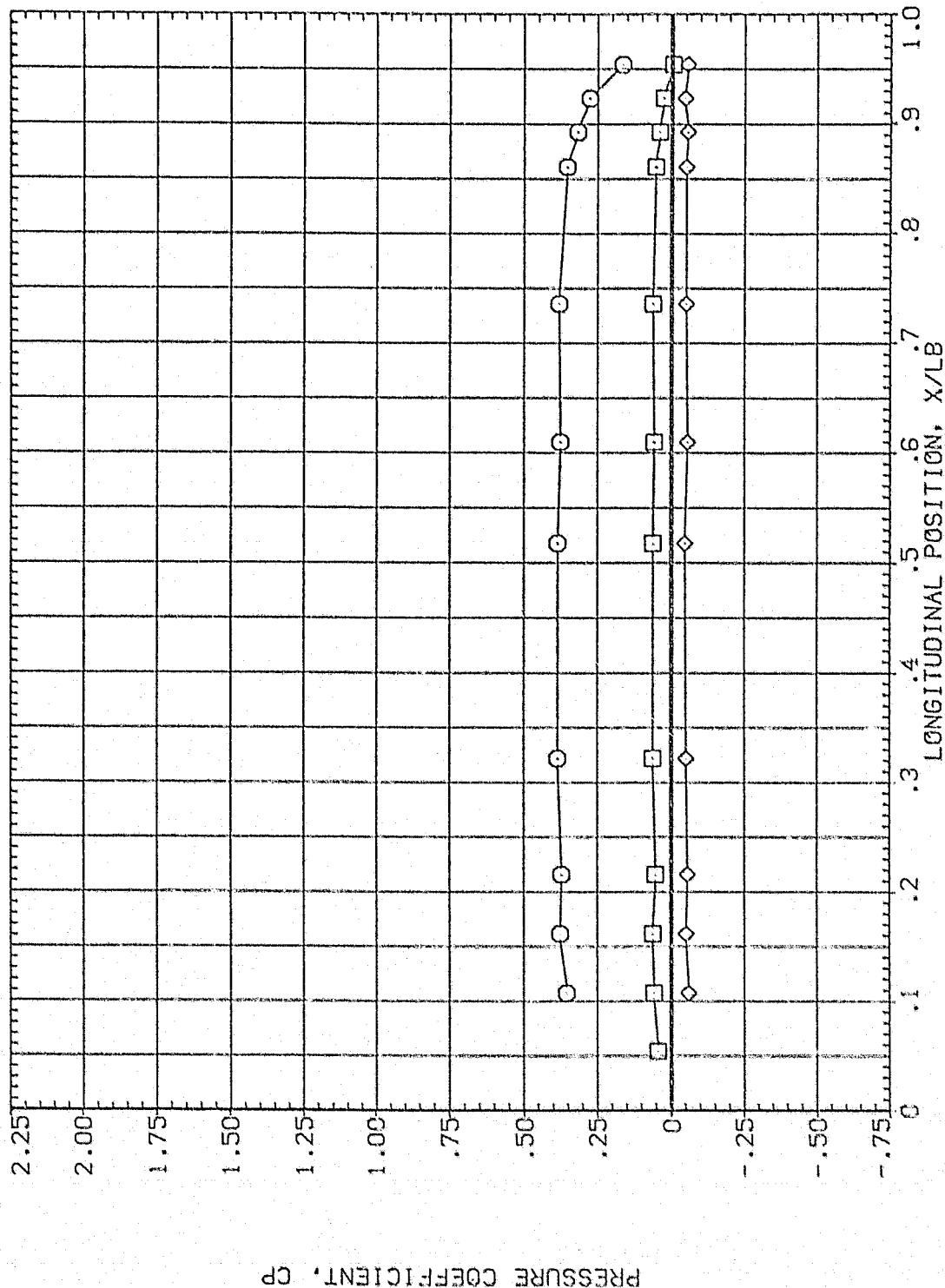


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

(P1A074)

000.
000.05

ALPHA	MACH
84.830	3.48

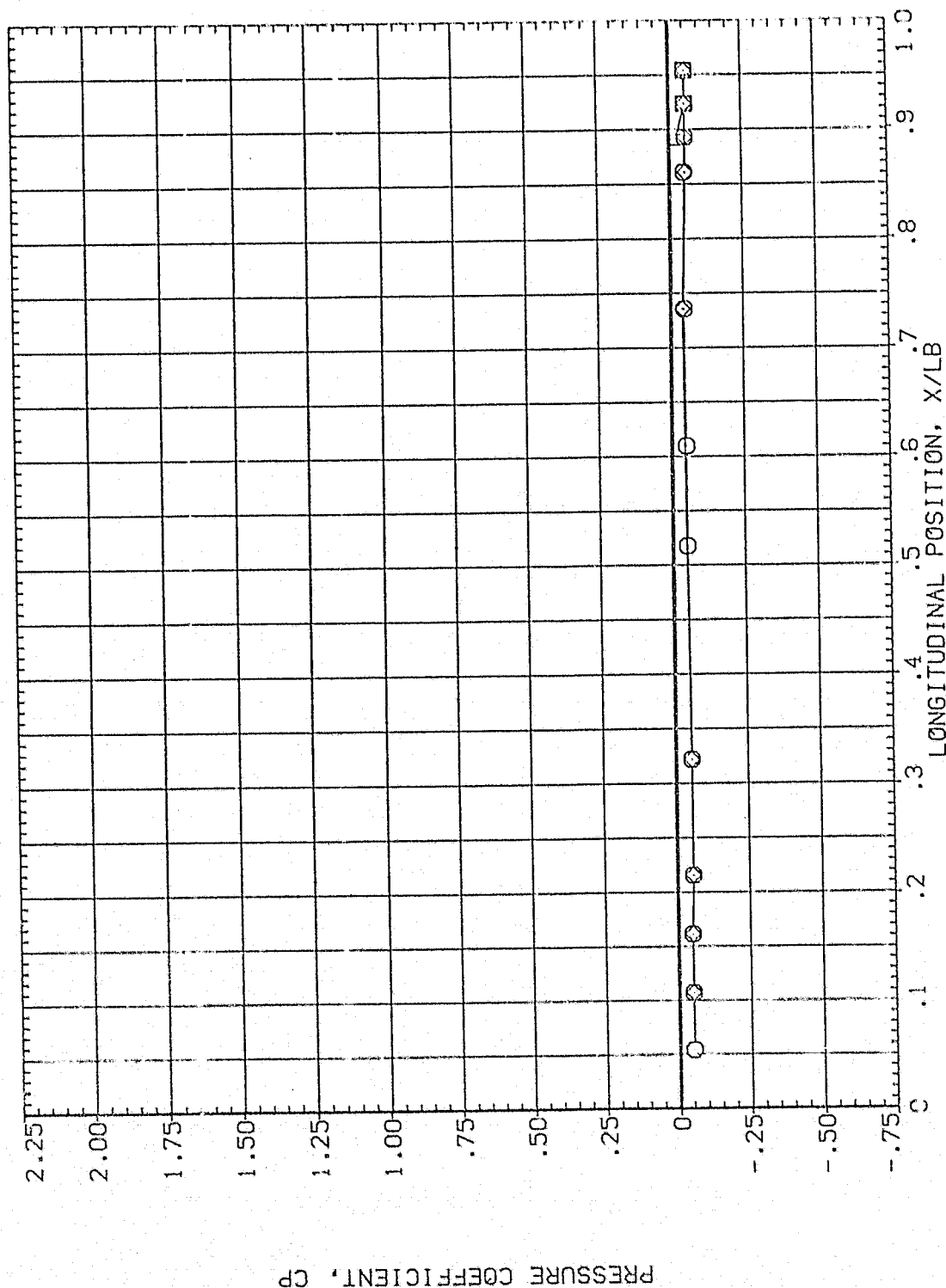


FIG. 8. PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES



MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES		
	.000	14.000	87.830	3.480	BETA	HOUNT	.000	OFFSET	90.000
□	14.000						2.000	PHI	.000
◇	24.000								

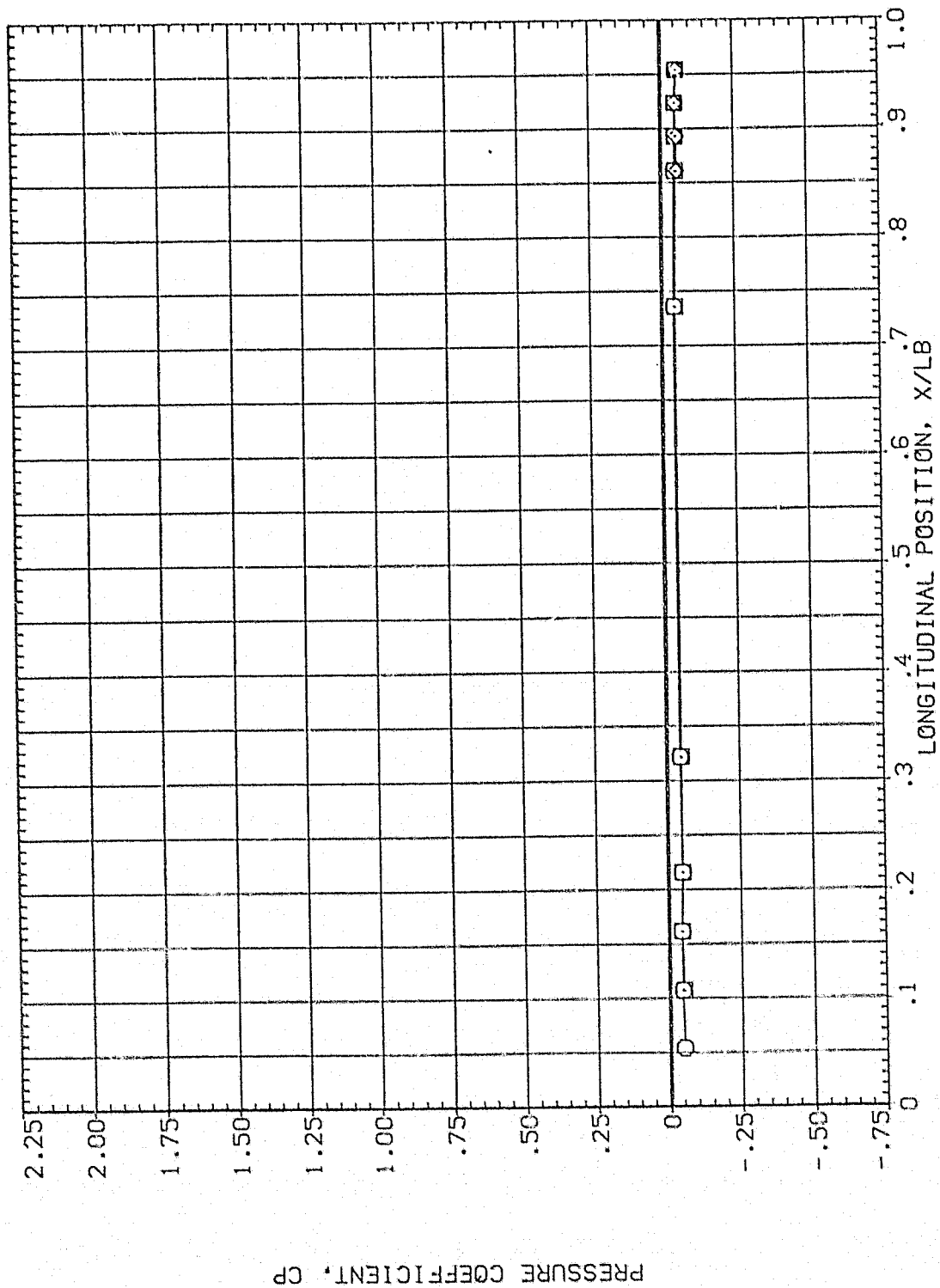


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
◇	45.000	87.830	3.480	0.000	OFFSET
□	67.500			2.000	PHI
◇	90.000				

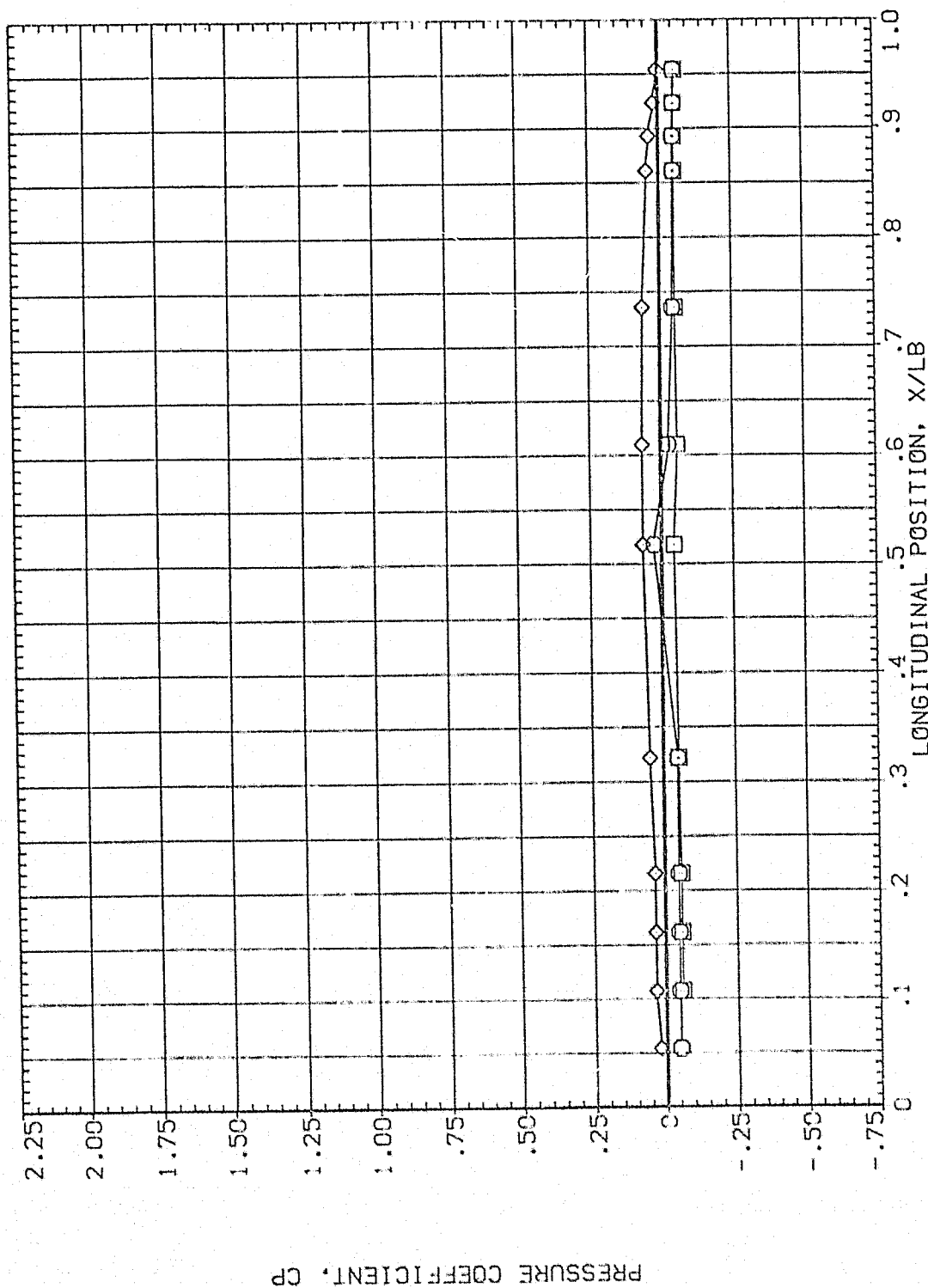


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA MOUNT	.000 OFFSET	90.000 PHI
○	112.500	87.830	3.480			
□	135.000					
◇	157.500					

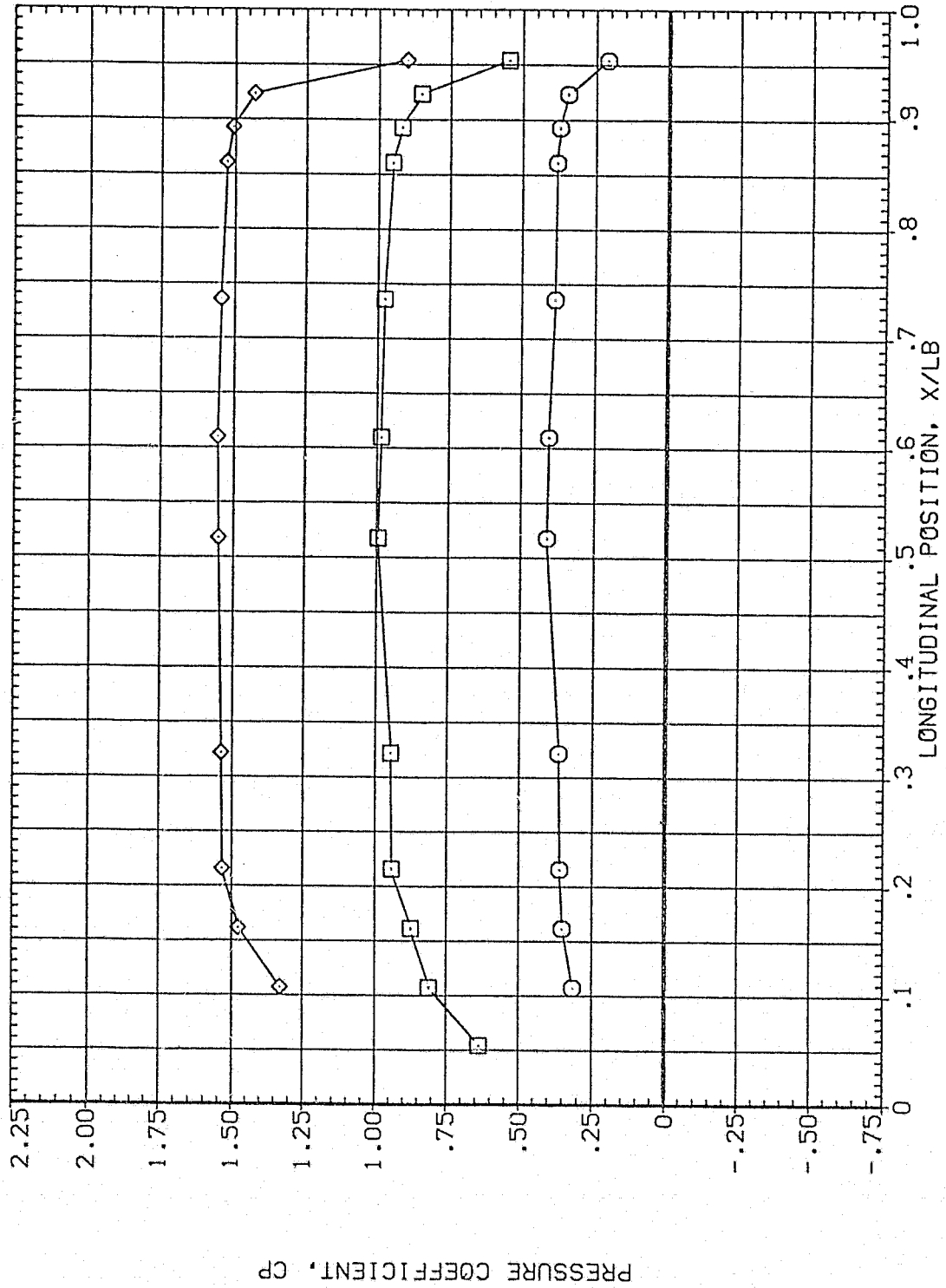


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	87.830	3.480	MOUNT	,000 OFFSET
□	202.500				2.000 PHI
◇	225.000				90.000

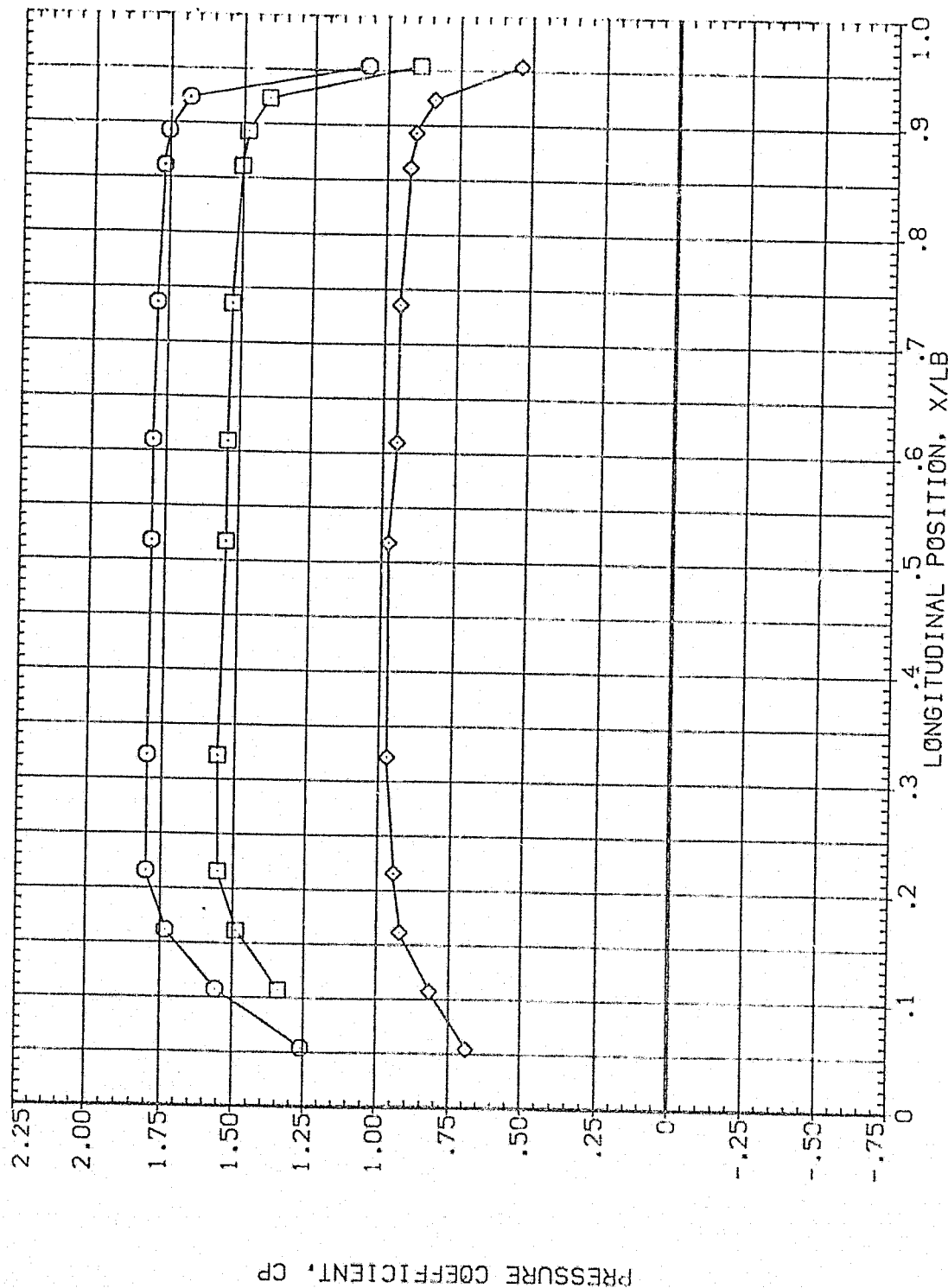


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL THETA ALPHA MACH
 O 247.500 87.830 3.480
 □ 270.000
 ◇ 292.500

BETA HOUNT
 .000 2.000
 .000 90.000
 PHI .000

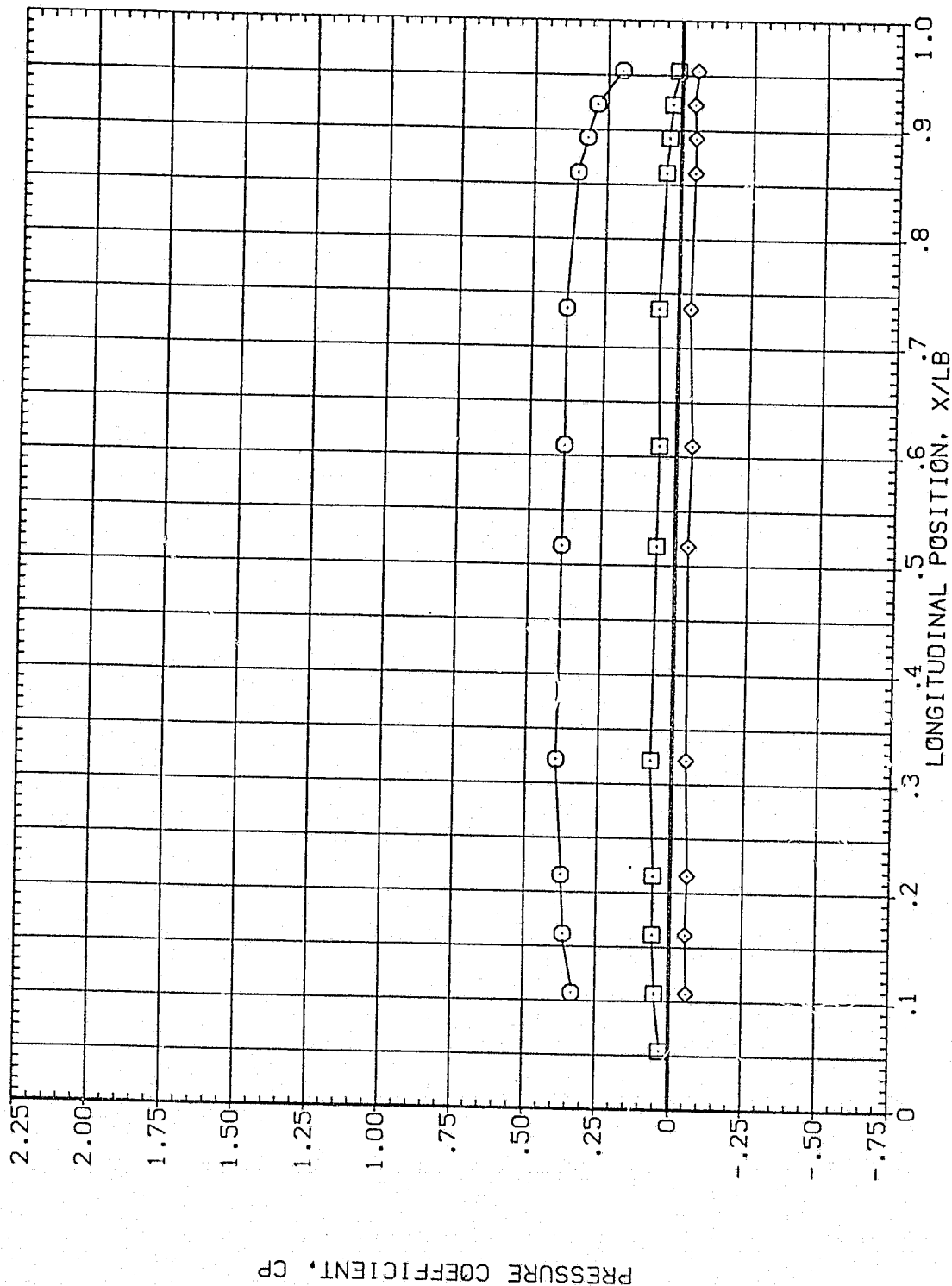


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES
○	315.000	87.830	3.480	BETA
□	326.000			MOUNT
◇	346.000			
				90.000
				0.000
				2.000
				PHI
				0.000

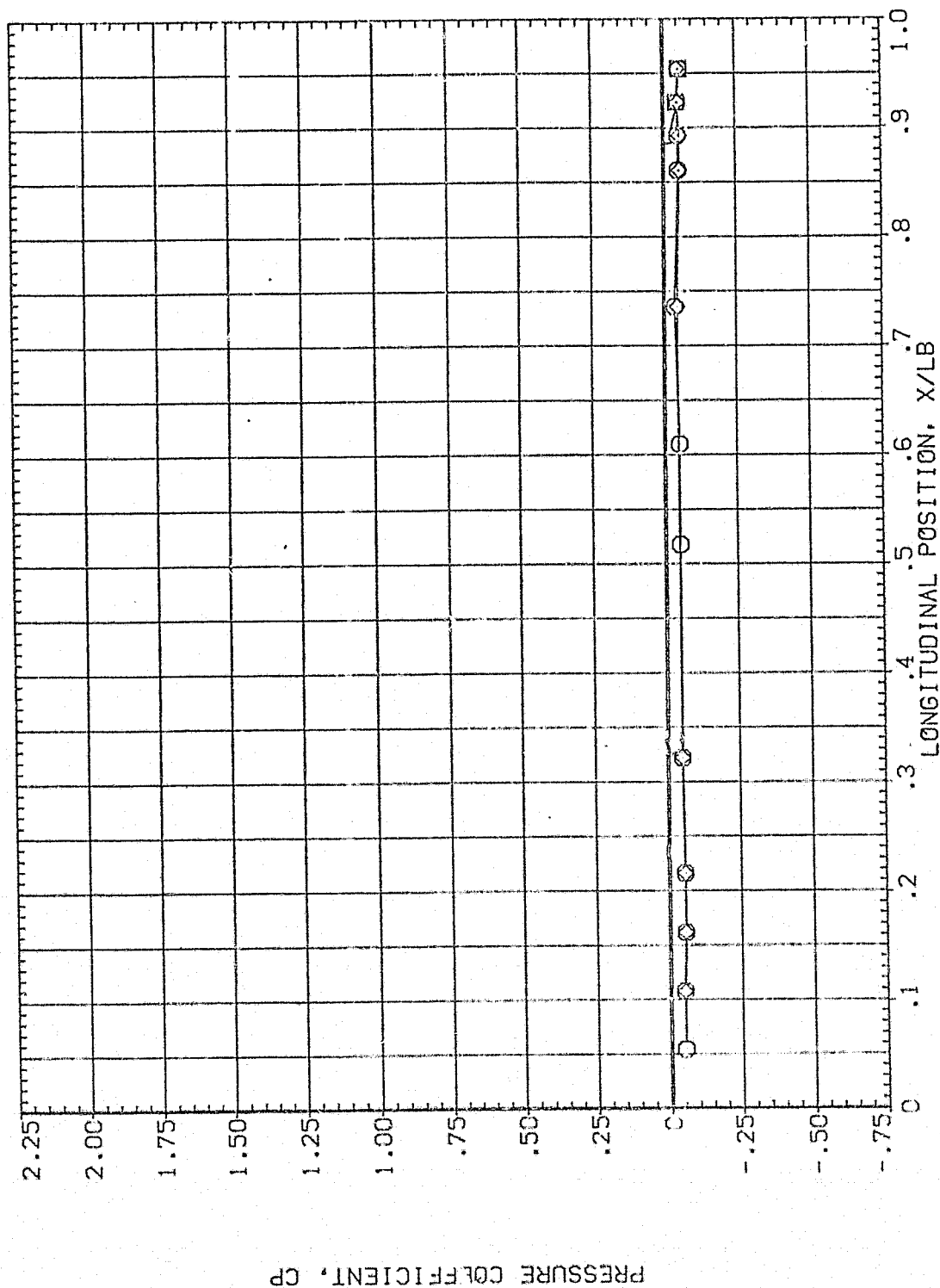


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL THETA ALPHA MACH
 ○ .000 89.830 3.480
 □ 14.000
 ◇ 24.000

PARAMETRIC VALUES
 BETA .000 OFFSET 90.000
 MOUNT 2.000 PHI .000

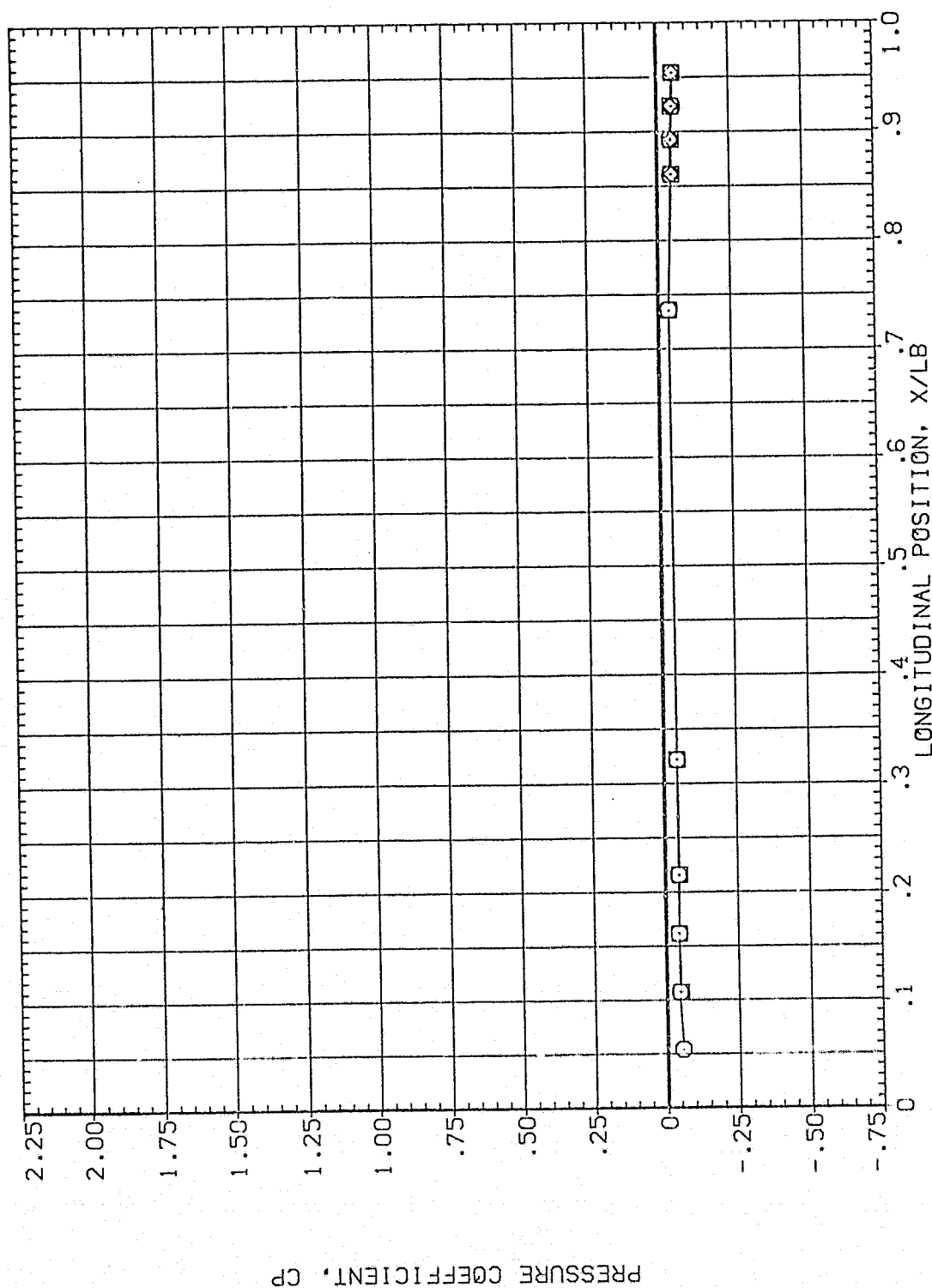


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL

THETA

ALPHA

MACH

BETA

PHI

OFFSET

90.000

2.000

.000

.000

.000

.000

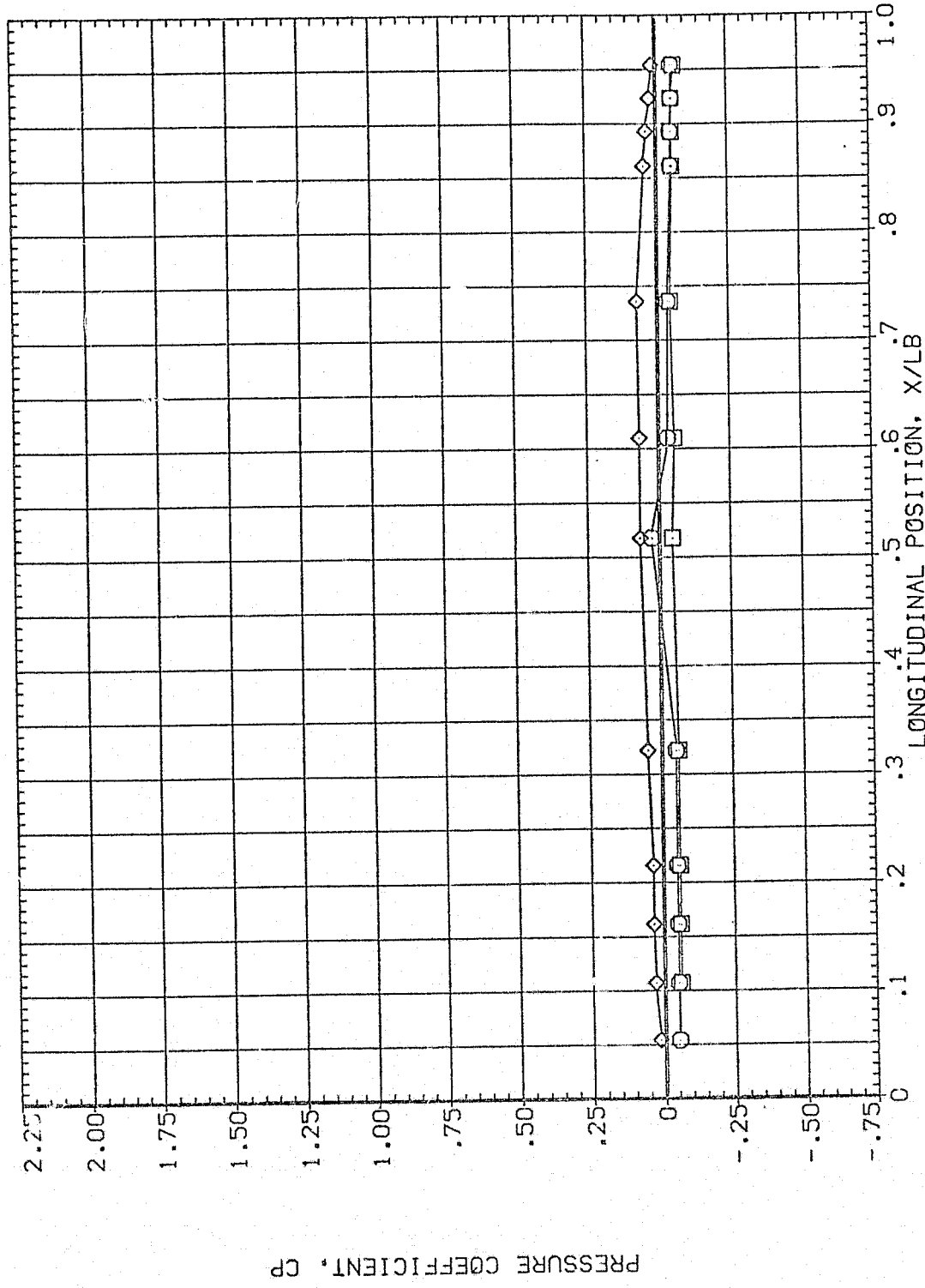


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	.000	OFFSET
○	112.500	89.830	3.480	HOUNT	2.000	PHI
□	135.000					
◇	157.500					

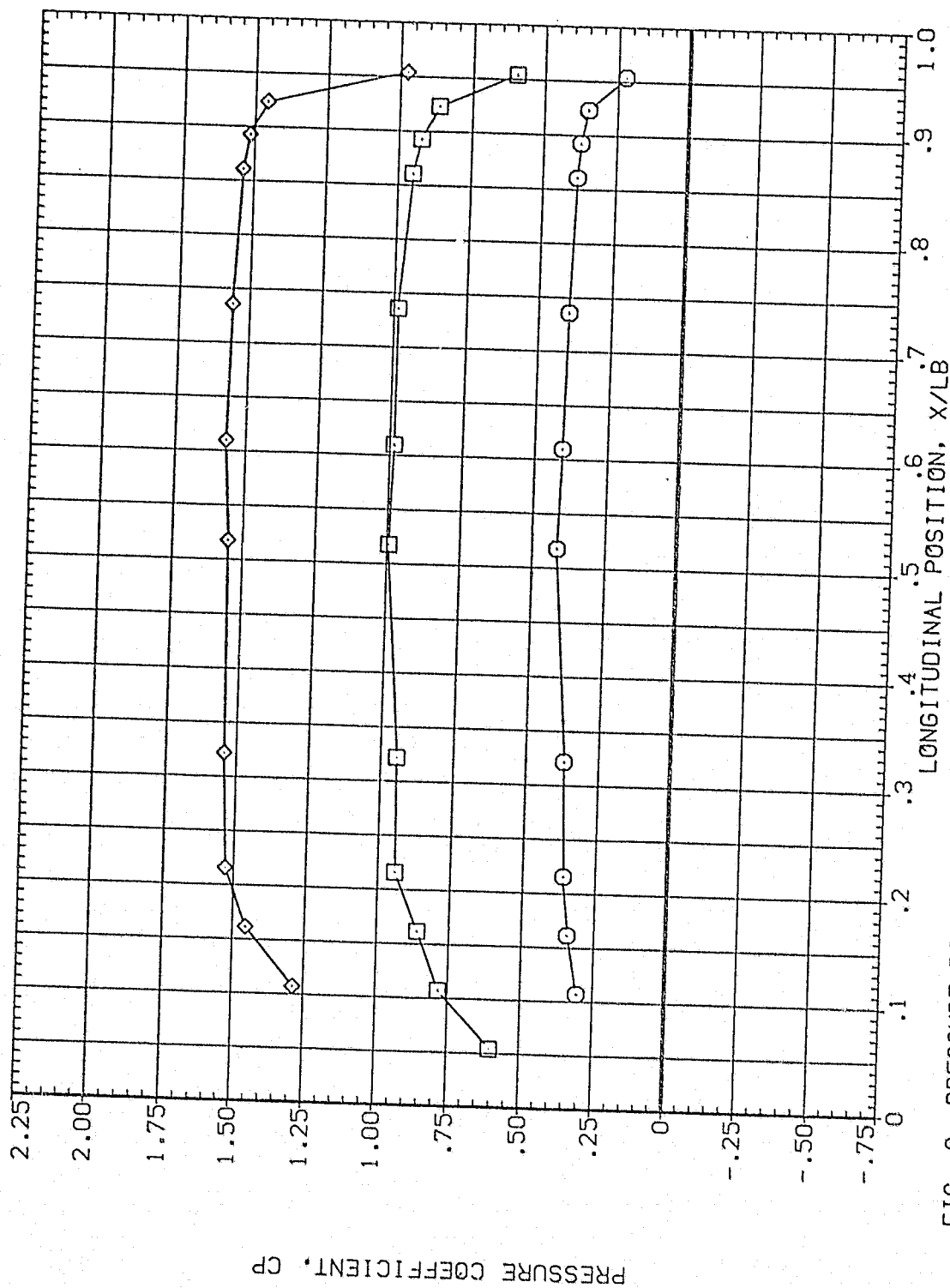


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	180.000	89.830	3.480	MOUNT	2.000	.000
□	202.500					
◇	225.000					

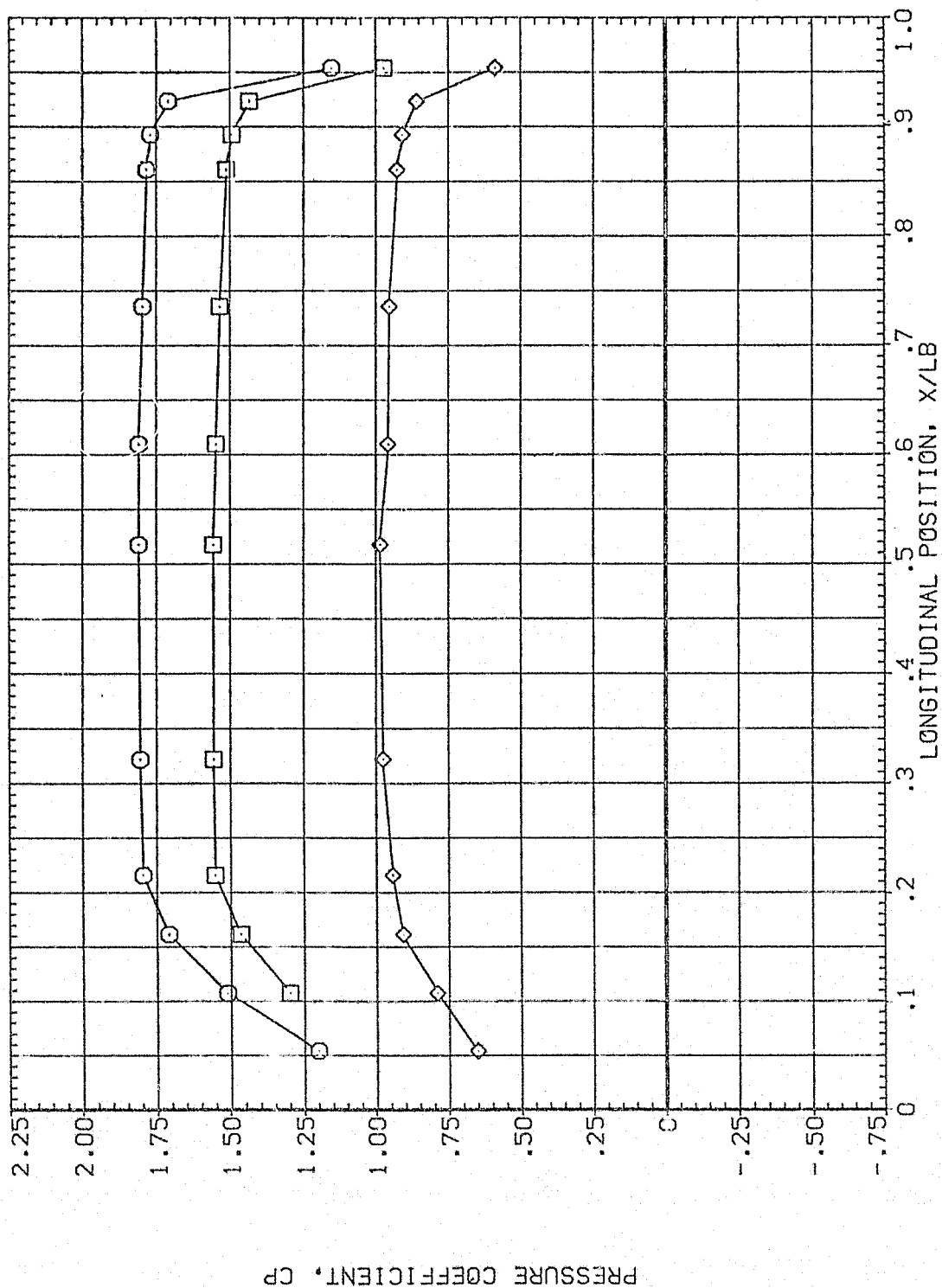


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	89.830	3.480	HOUNT	.000	.000
□	270.000				2.000	
◇	292.500				90.000	

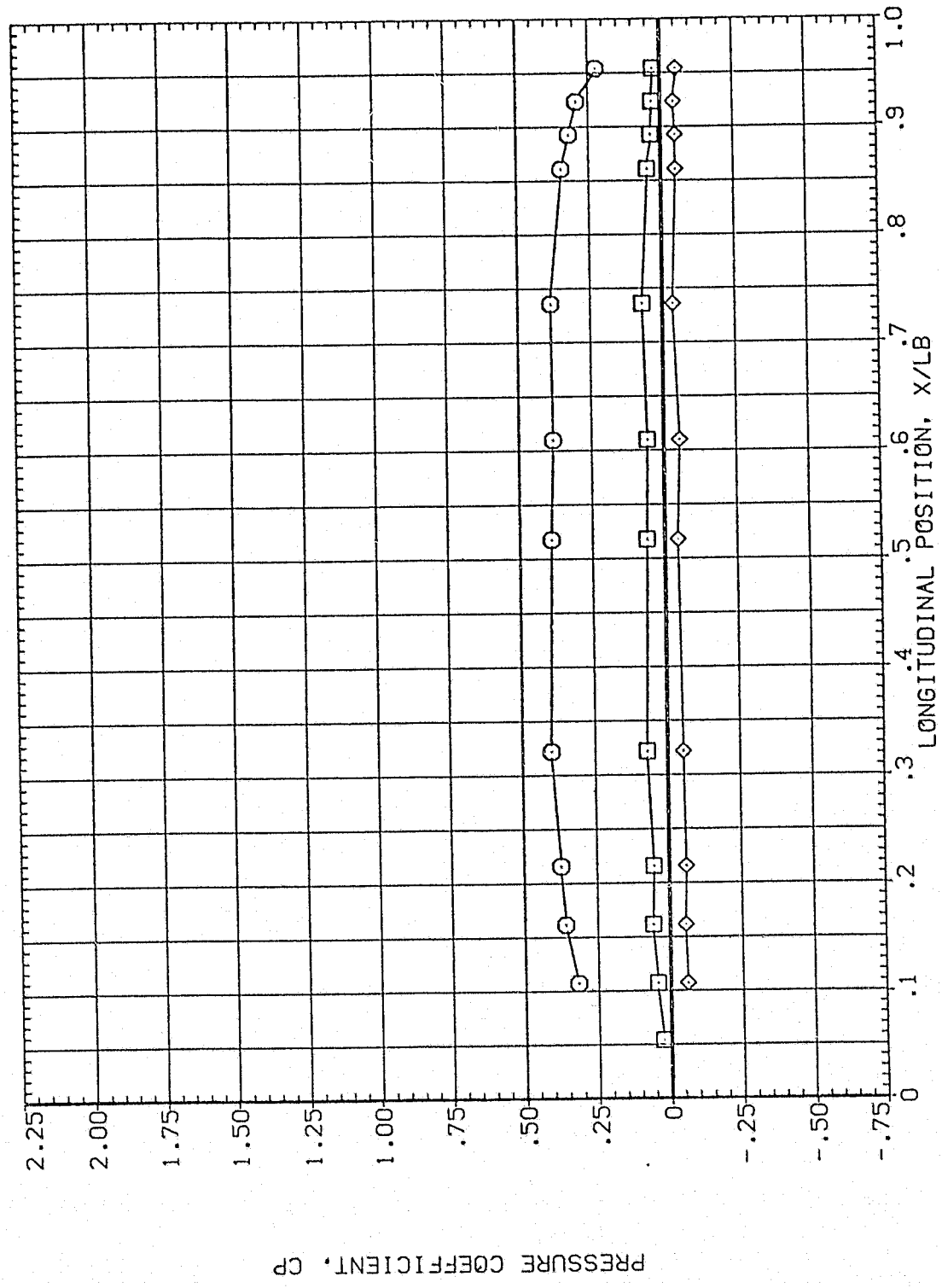


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

CP1A0763

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL THETA ALPHA MACH
 ◊ 315.000 89.830 3.480
 □ 326.000
 ◊ 346.000

PARAMETRIC VALUES
 .000 .000 90.000
 BETA OFFSET PHI
 MOUNT 2.000 .000

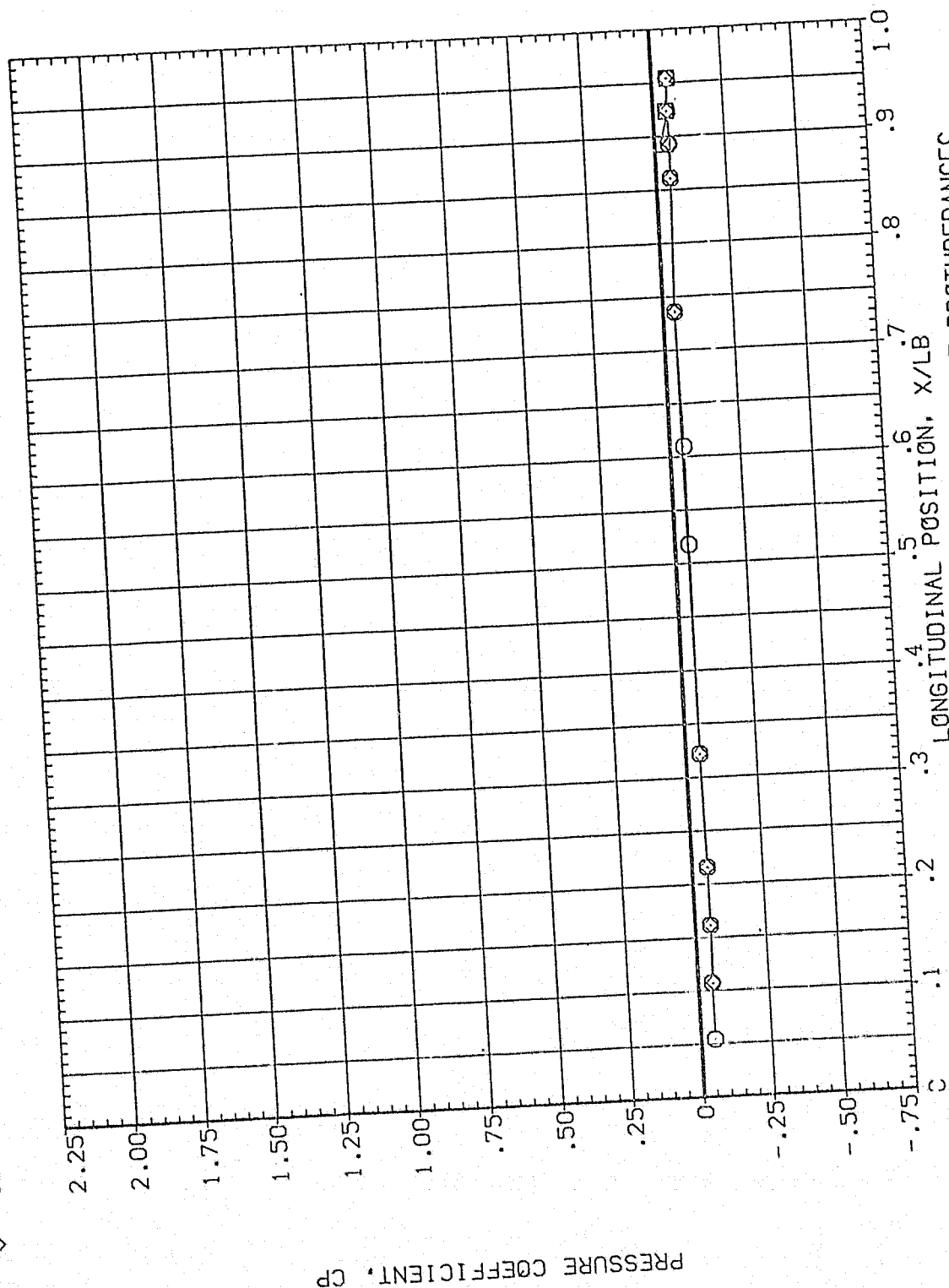


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL THETA ALPHA MACH
 14.000 91.863 3.480
 24.000

PARAMETRIC VALUES
 BETA .000 OFFSET 90.000
 MOUNT 2.000 PHI .000

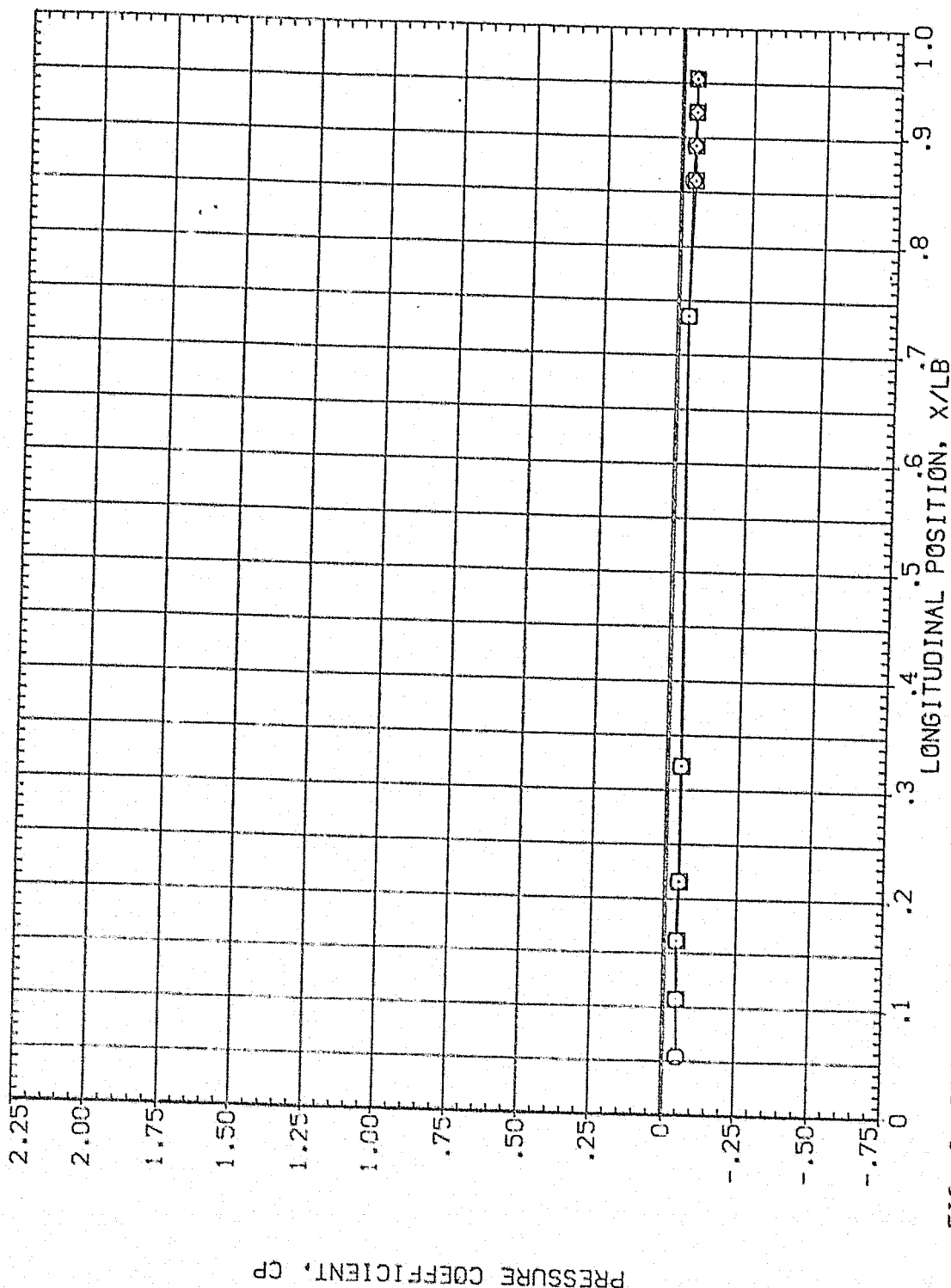


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES
○	45.000	91.850	3.480	BETA
□	67.500			MOUNT
◇	90.000			OFFSET
				PHI
				90.000
				.000
				2.000
				.000

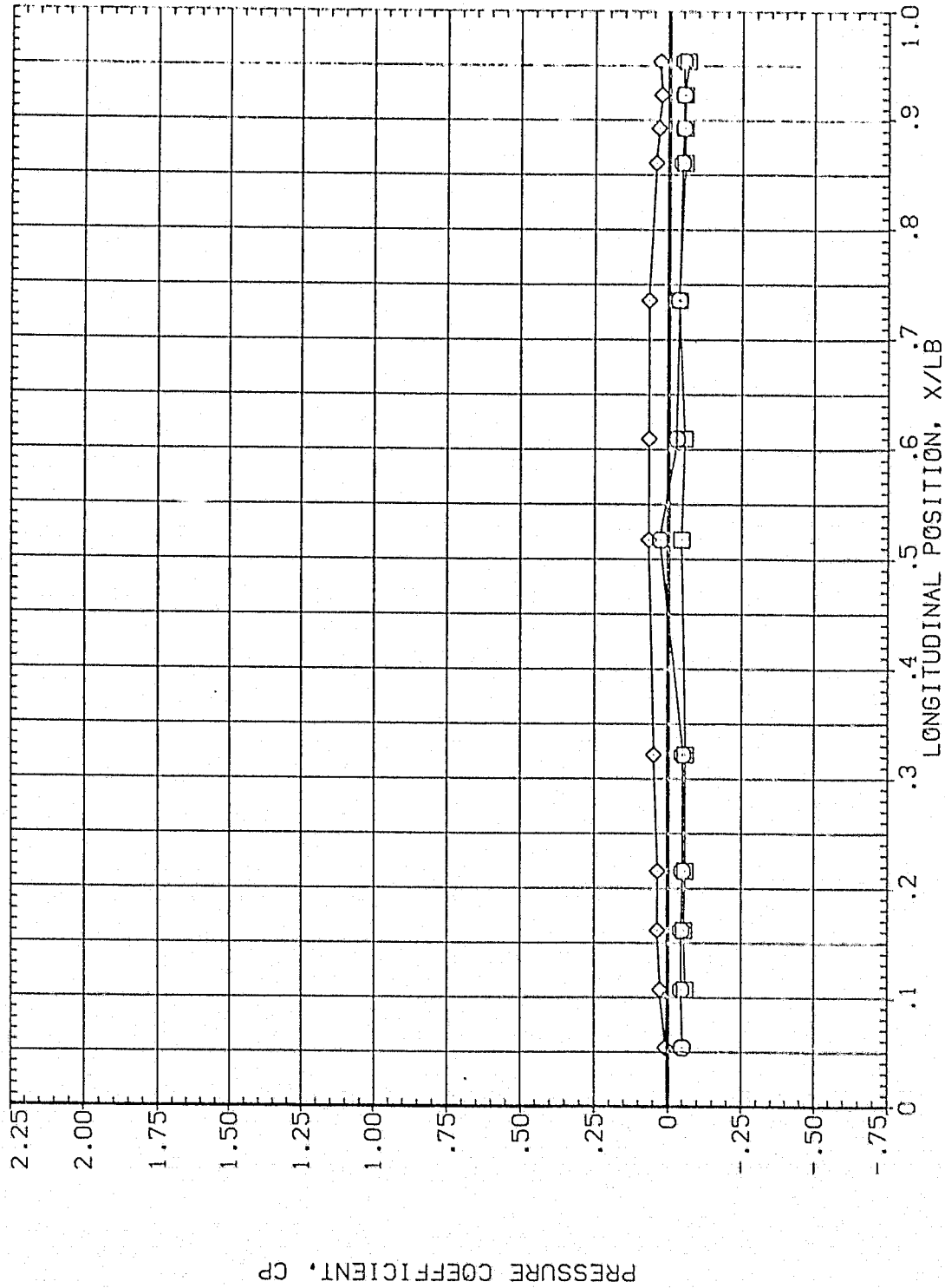


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL	PARAMETRIC VALUES		
	THETA	ALPHA	MACH
○	112.500	91.850	3.480
□	135.000		
◇	157.500		
		BETA	90.000
		HOUNT	.000
		OFFSET	.000
		PHI	.000

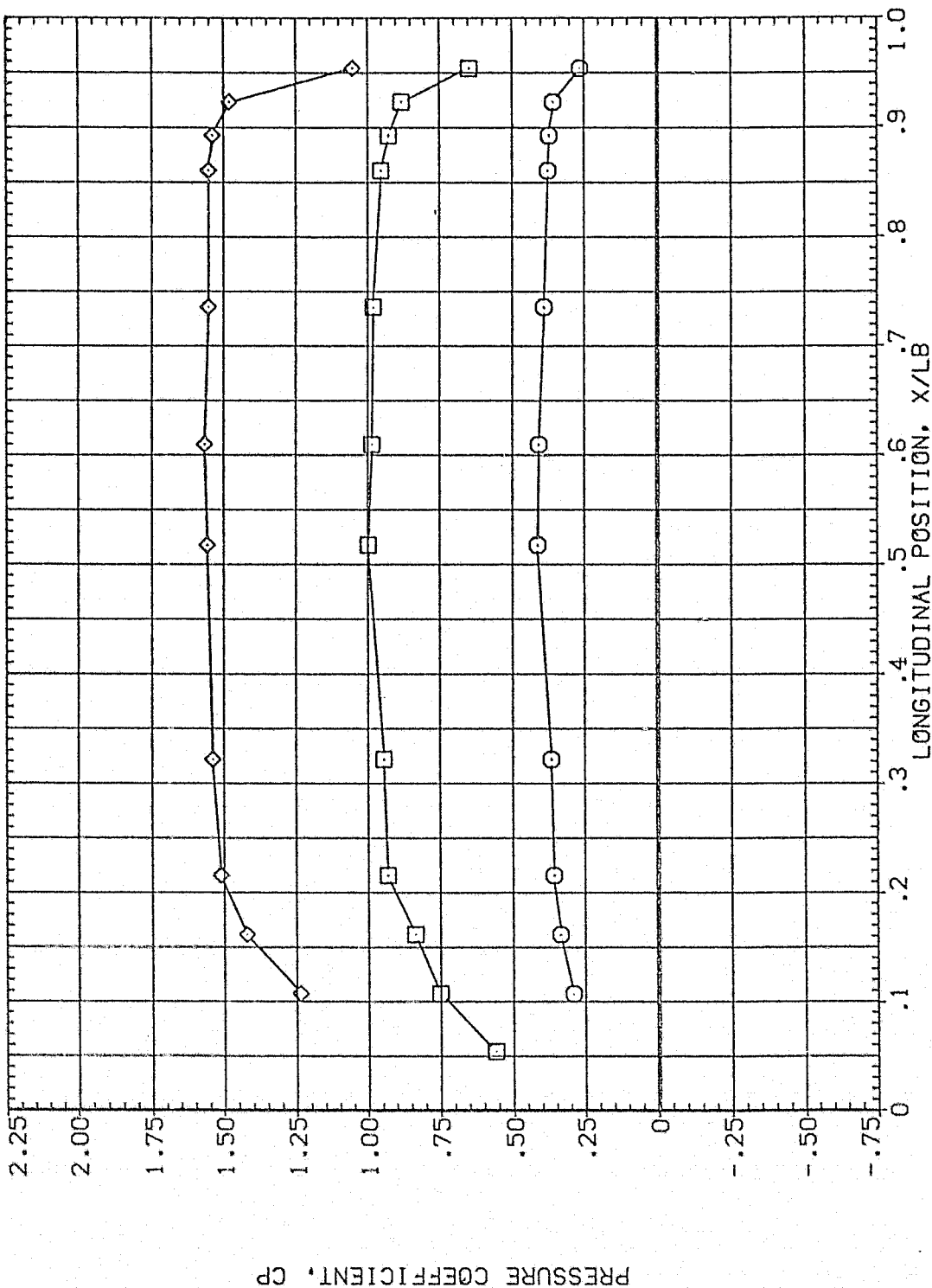


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

(P1A077)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
PHI 90.000
OFFSET .000

THETA ALPHA MACH
180.000 91.850 3.480
202.500
225.000

SYMBOL
○
□
◇

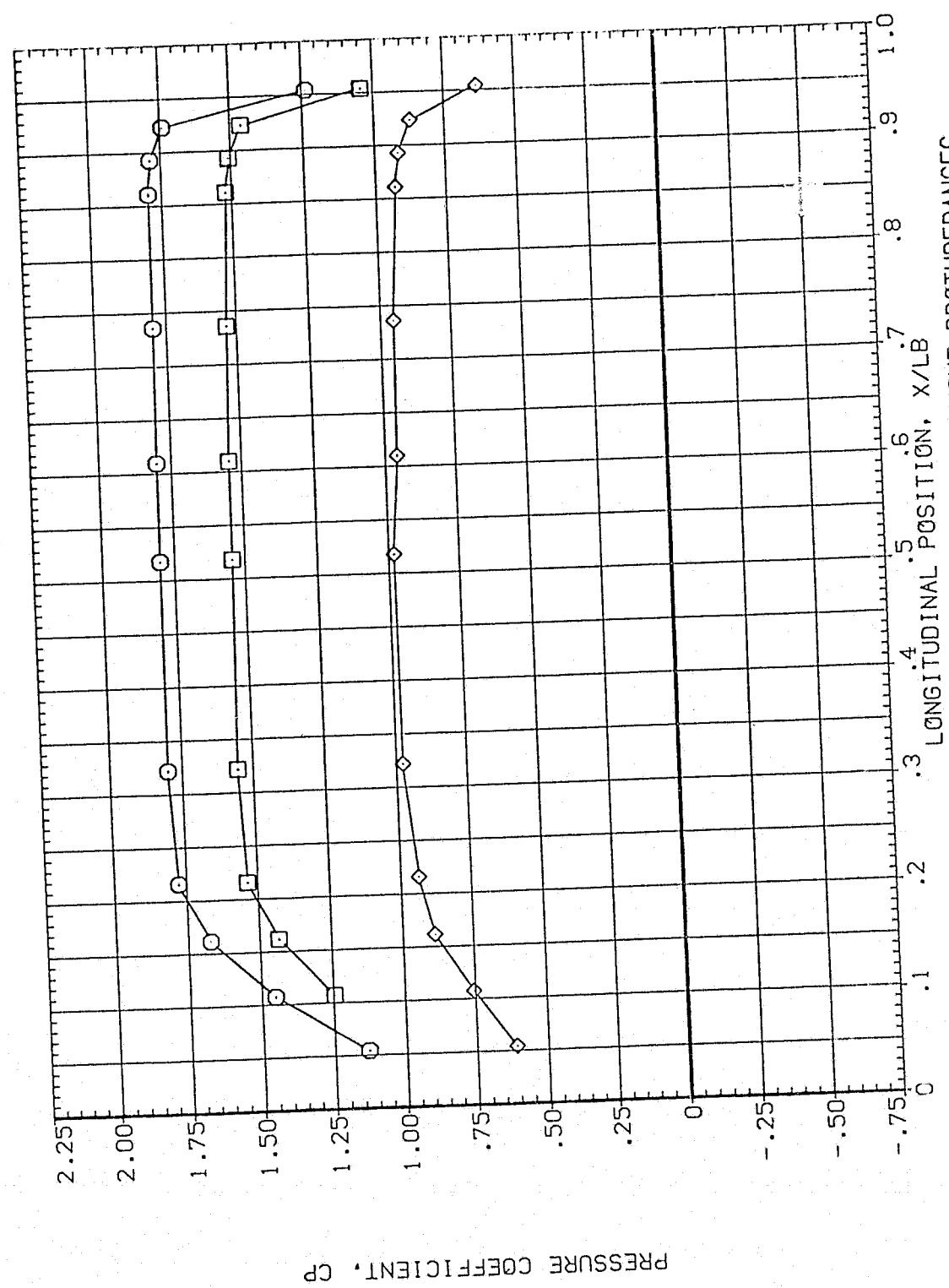


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL THETA ALPHA MACH
 ○ 247.500 91.850 3.480
 □ 270.000
 ◇ 292.500

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

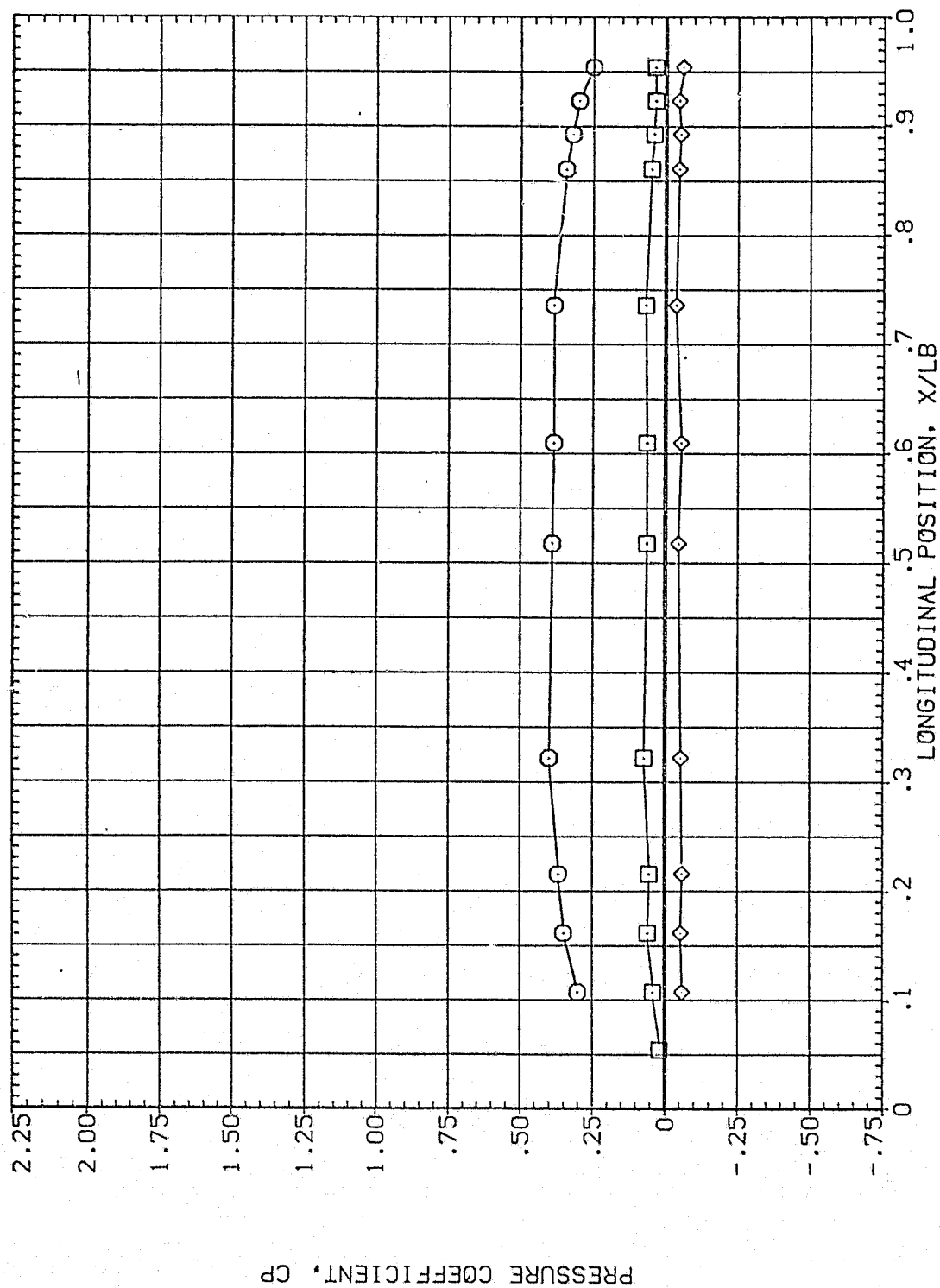


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 595 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	91.850	3.480	MOUNT	.000 OFFSET
□	326.000				2.000 PHI
◇	346.000				90.000 .003

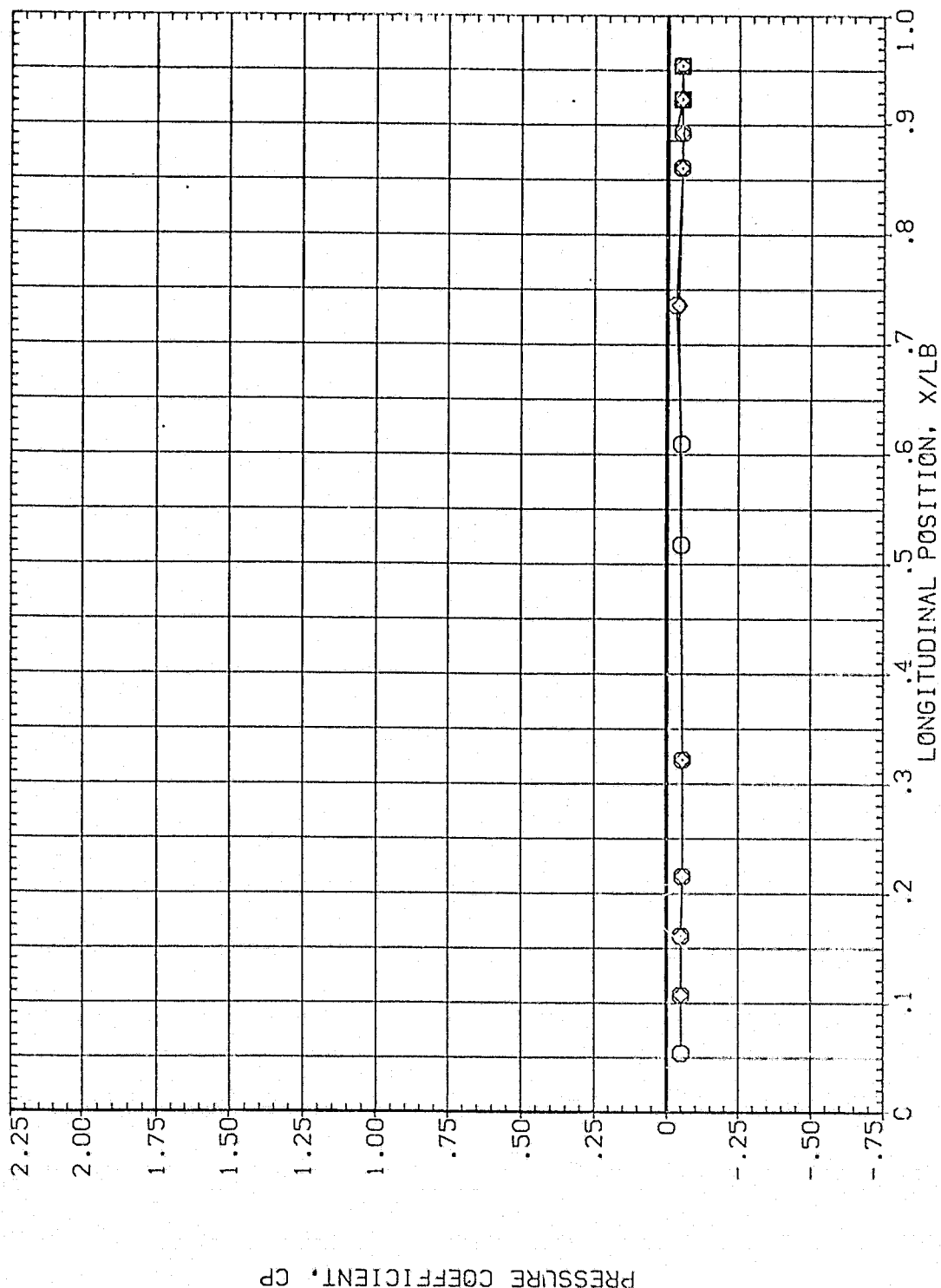


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.000	94.850	3.480	HOUNT	.000 OFFSET
□	14.000				2.000 PHI
◇	24.000				90.000

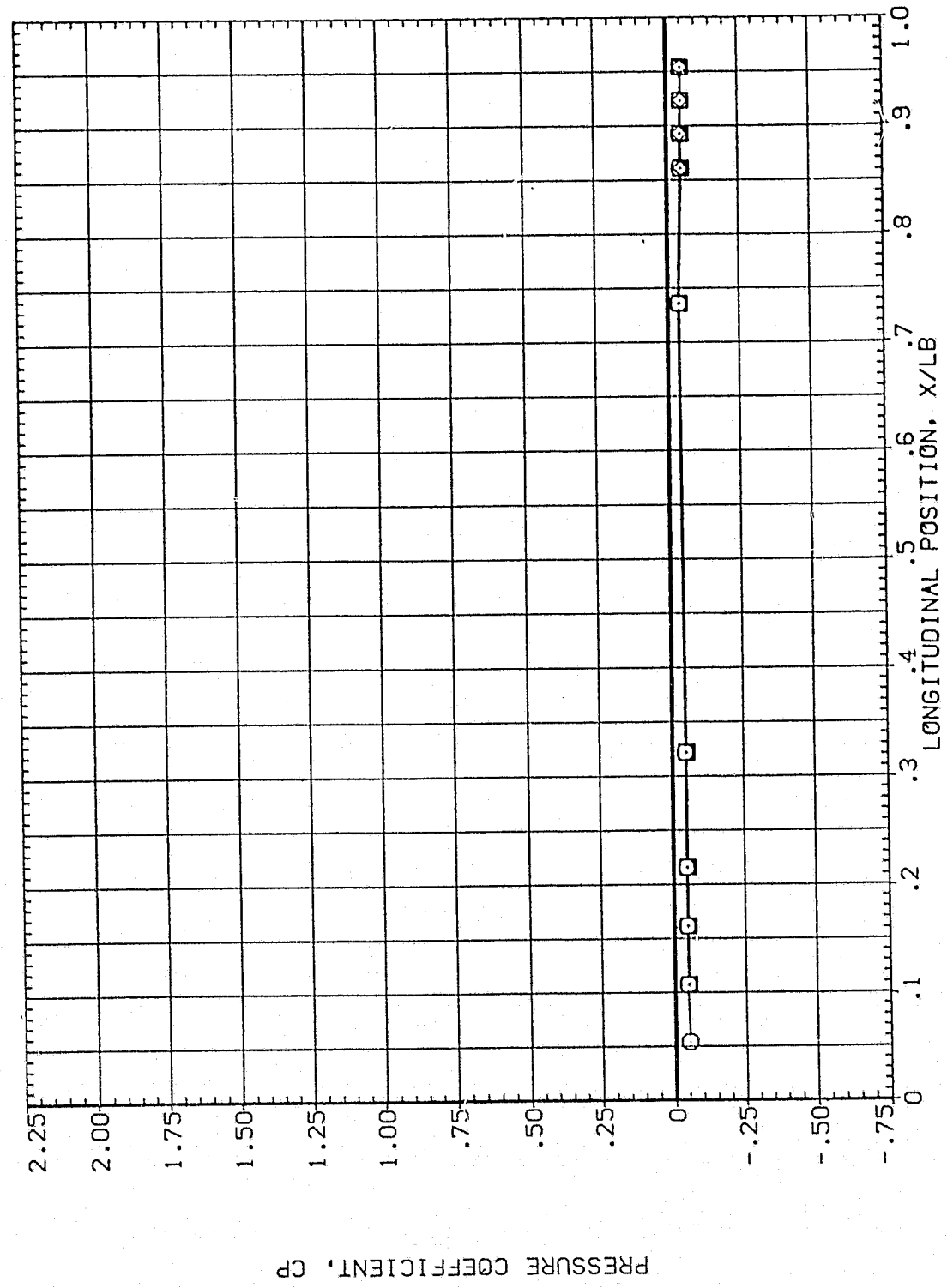


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	45.000	94.850	3.480	MOUNT	2.000	PHI
□	67.500					.000
◇	90.000					

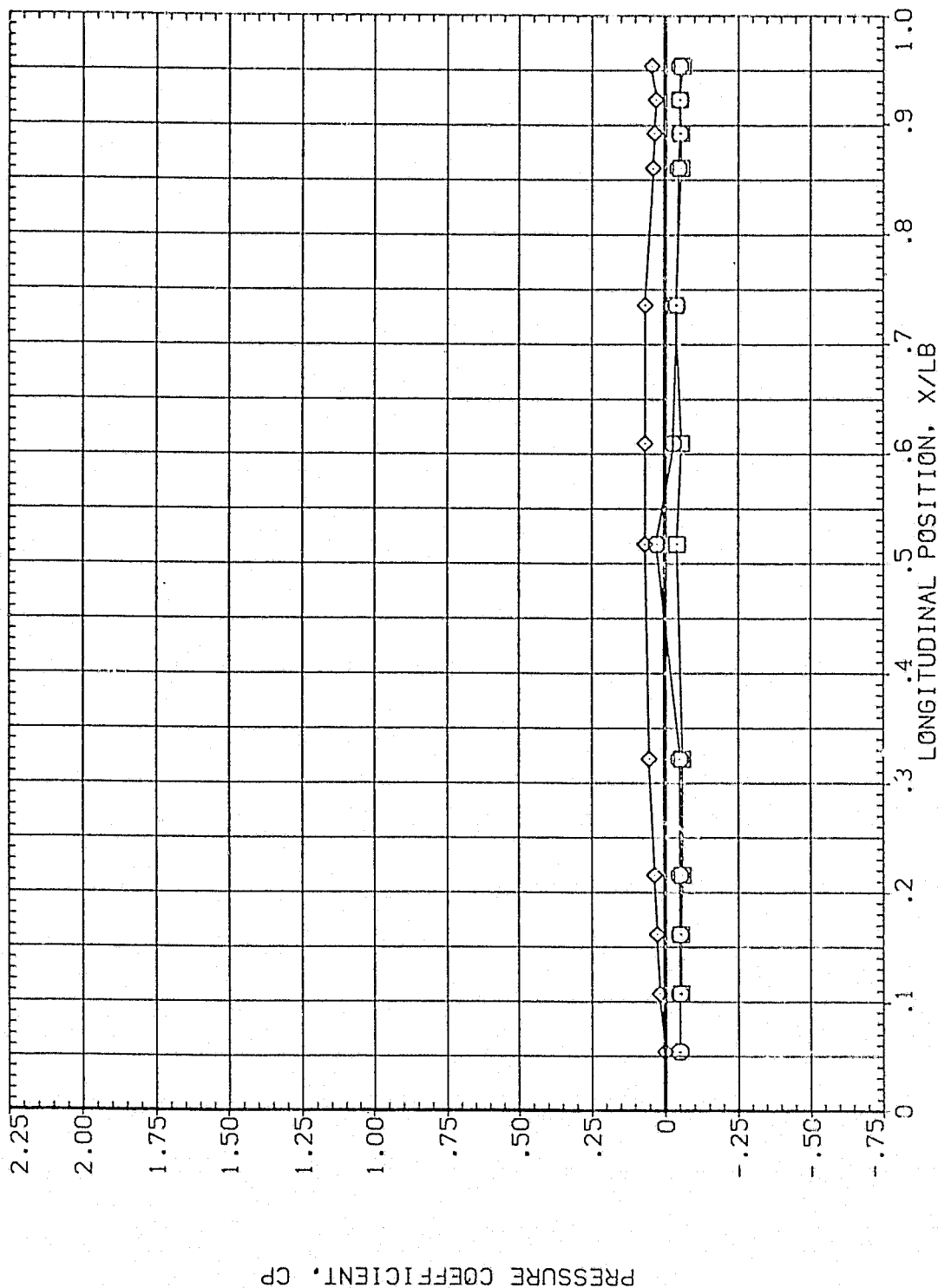


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA MOUNT	.000 PHI	90.000 .000
○	112.500	94.850	3.480			
□	135.000					
◇	157.500					

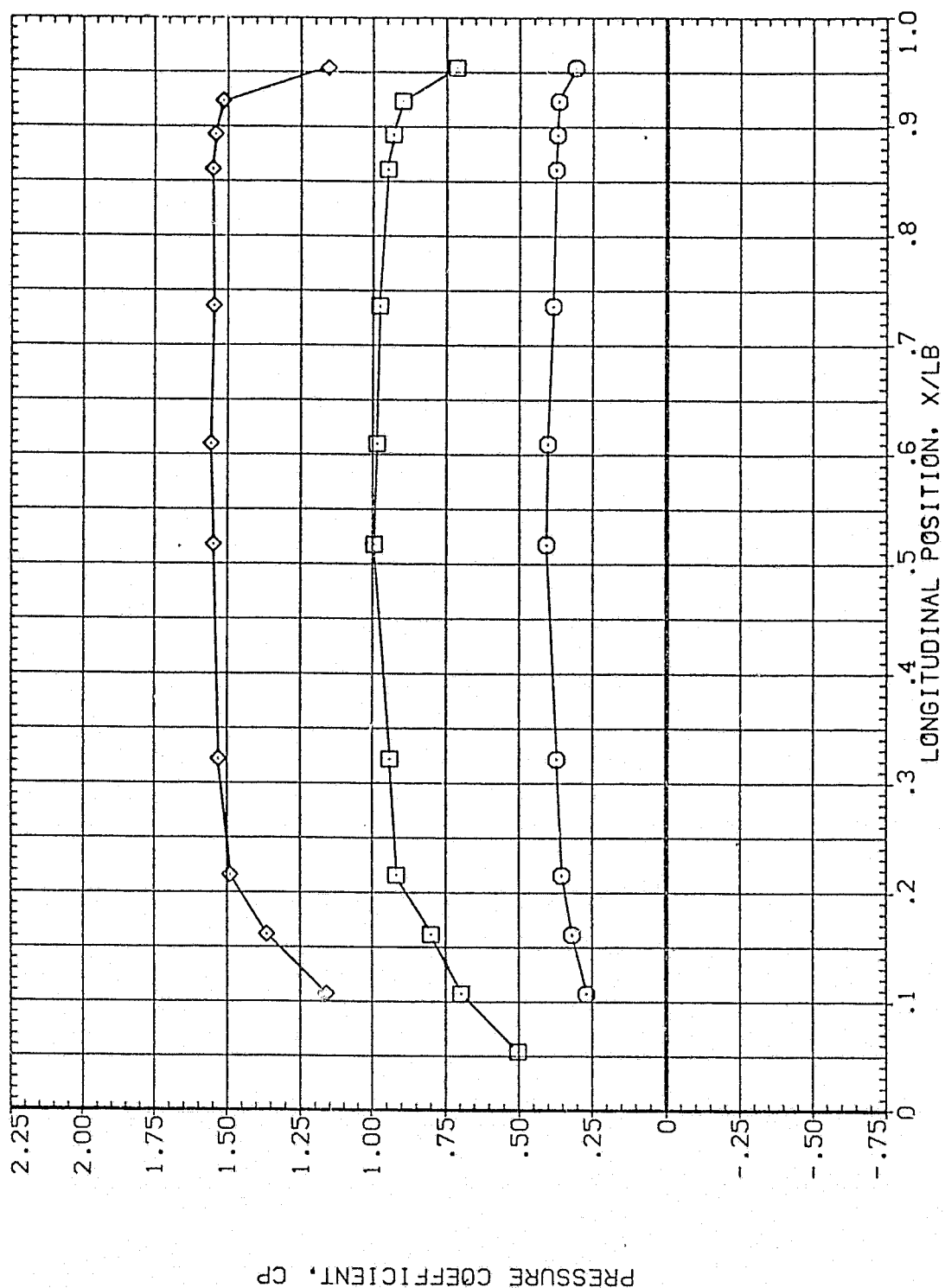


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	94.850	3.480	MOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				.000

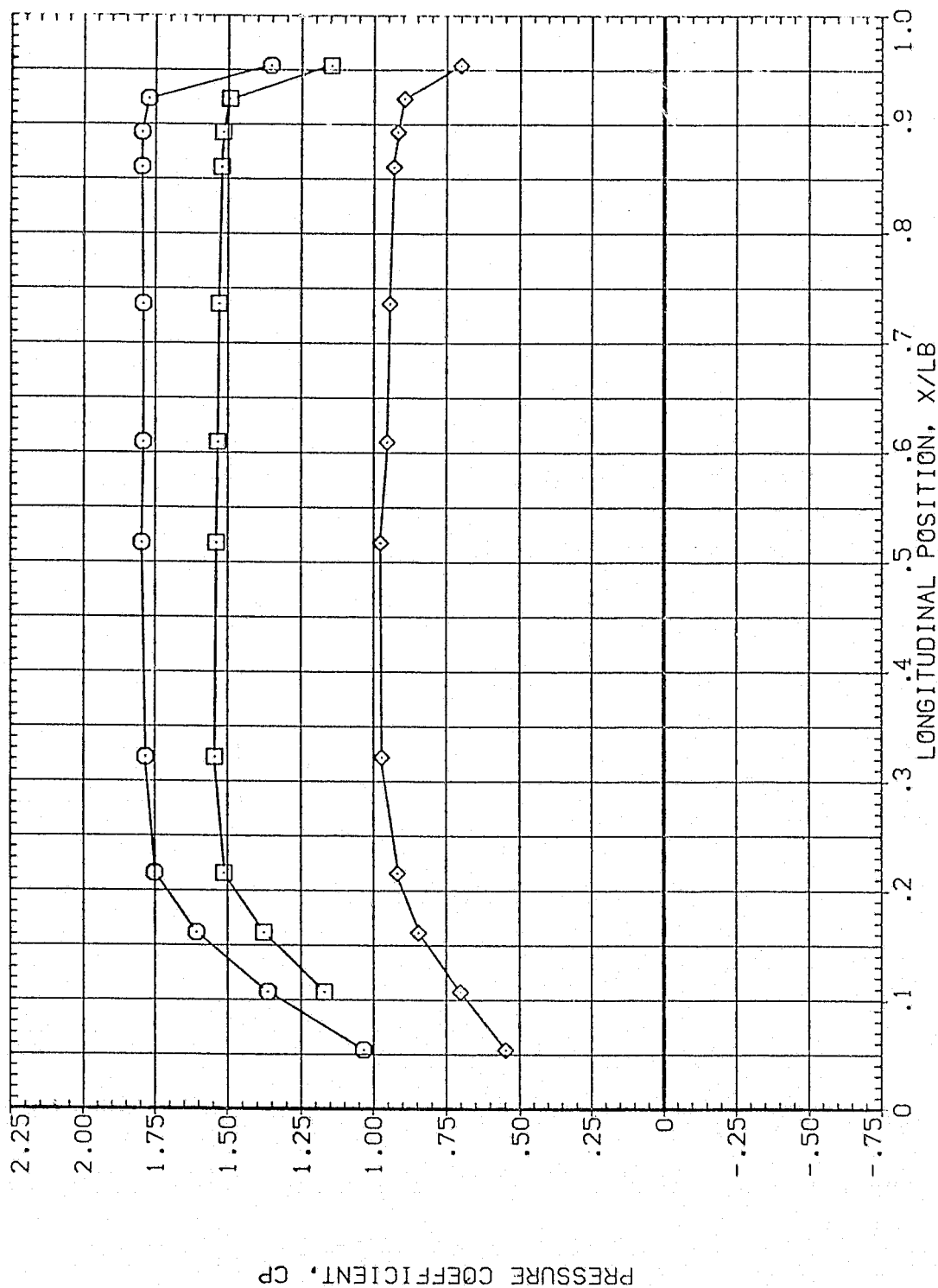


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	THETA		ALPHA		MACH		BETA		PARAMETRIC VALUES	
	247.500	270.000	94.850	94.850	3.480	3.480	10.000	10.000	.000	OFFSET
○	247.500	270.000	94.850	94.850	3.480	3.480	10.000	10.000	.000	PHI
□	247.500	270.000	94.850	94.850	3.480	3.480	10.000	10.000	.000	PHI
◇	247.500	270.000	94.850	94.850	3.480	3.480	10.000	10.000	.000	PHI

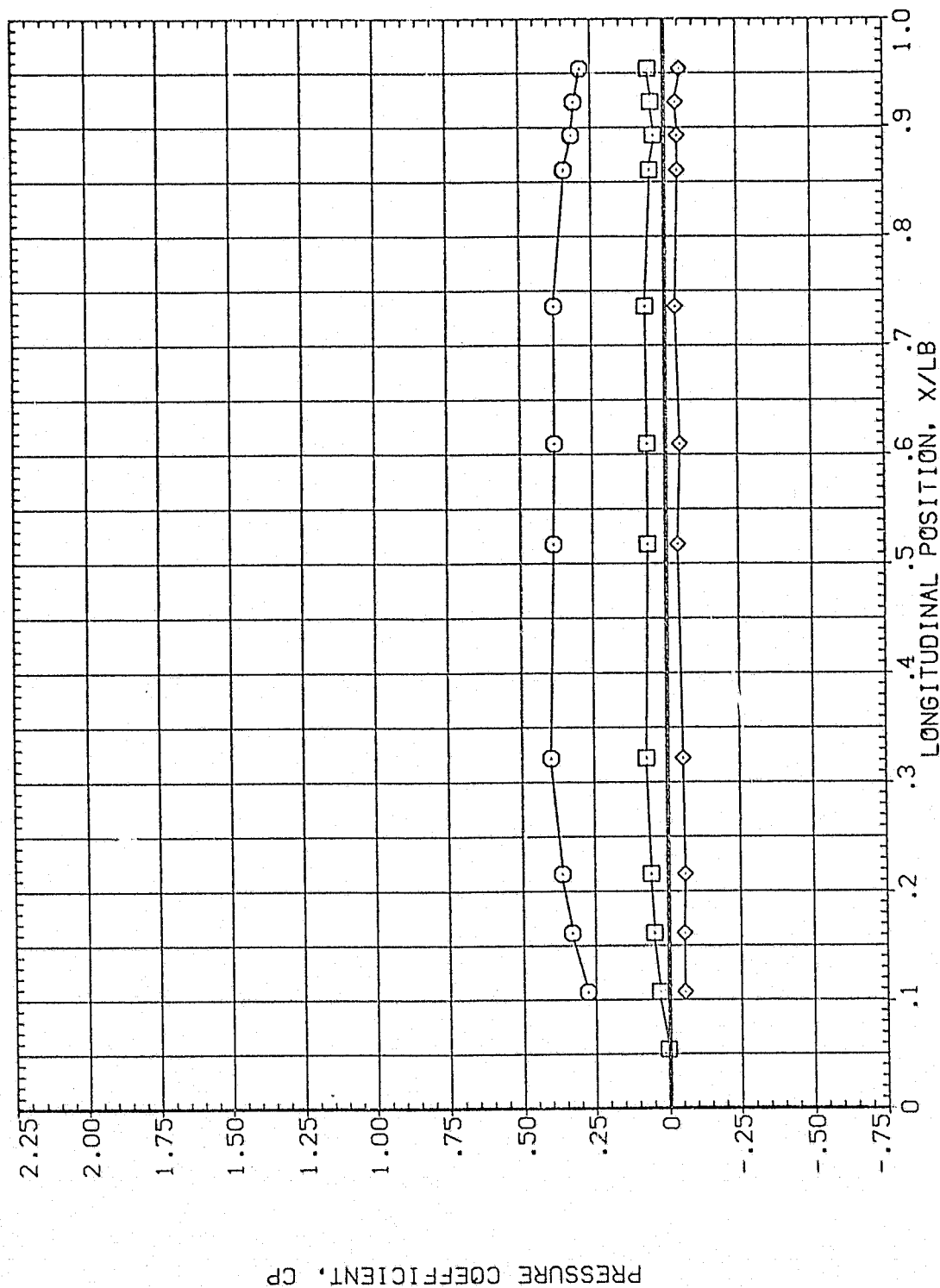


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	PARAMETRIC VALUES		
	THETA	ALPHA	MACH
○	315.000	94.850	3.480
□	326.000		
◇	346.000		
		BETA	90.000
		MOUNT	.000
		OFFSET	PHI
			.000

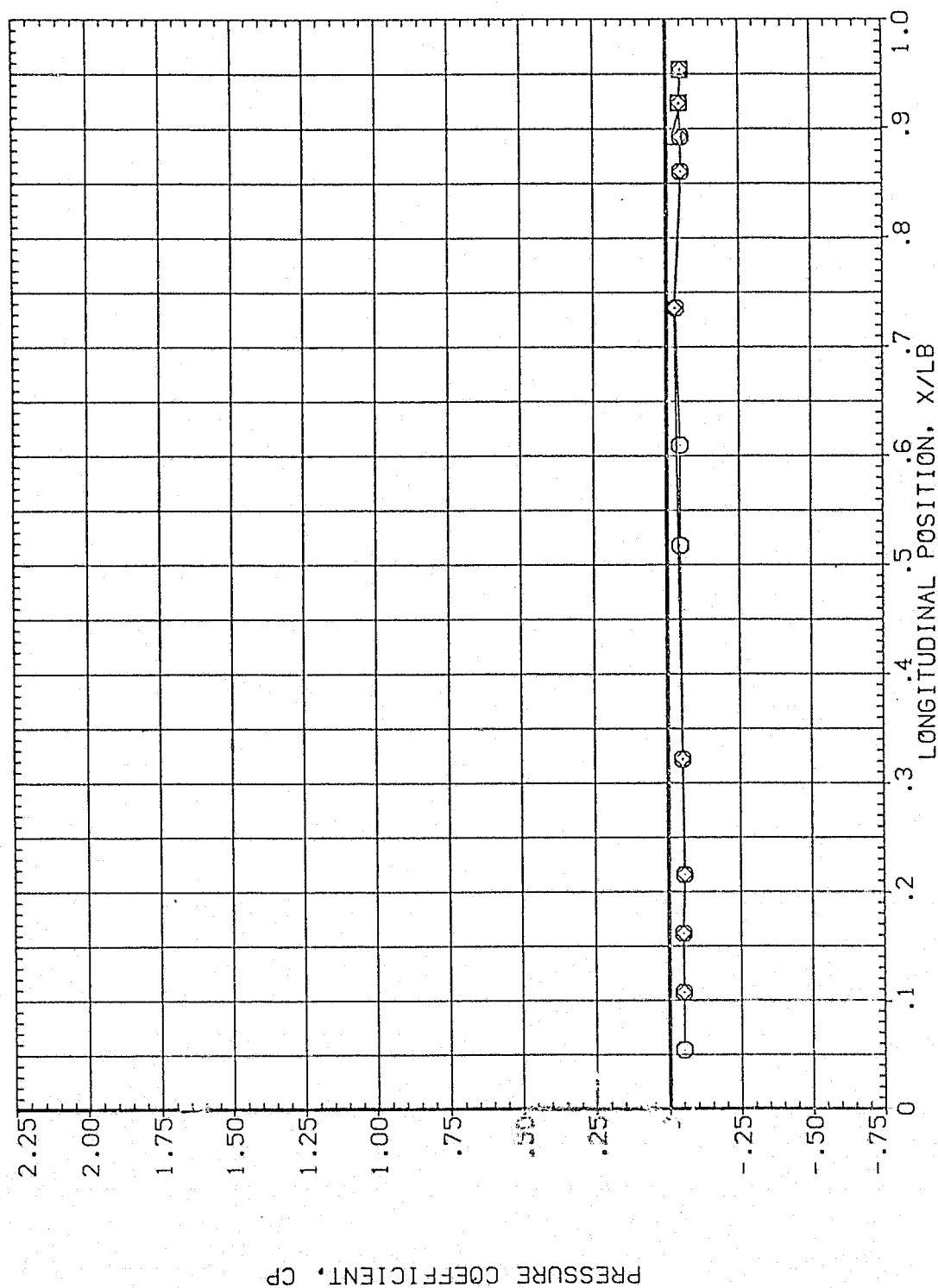


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079J)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.000	97.830	3.480	MOUNT	.000 OFFSET PHI
□	14.000				2.000
◇	24.000				.000

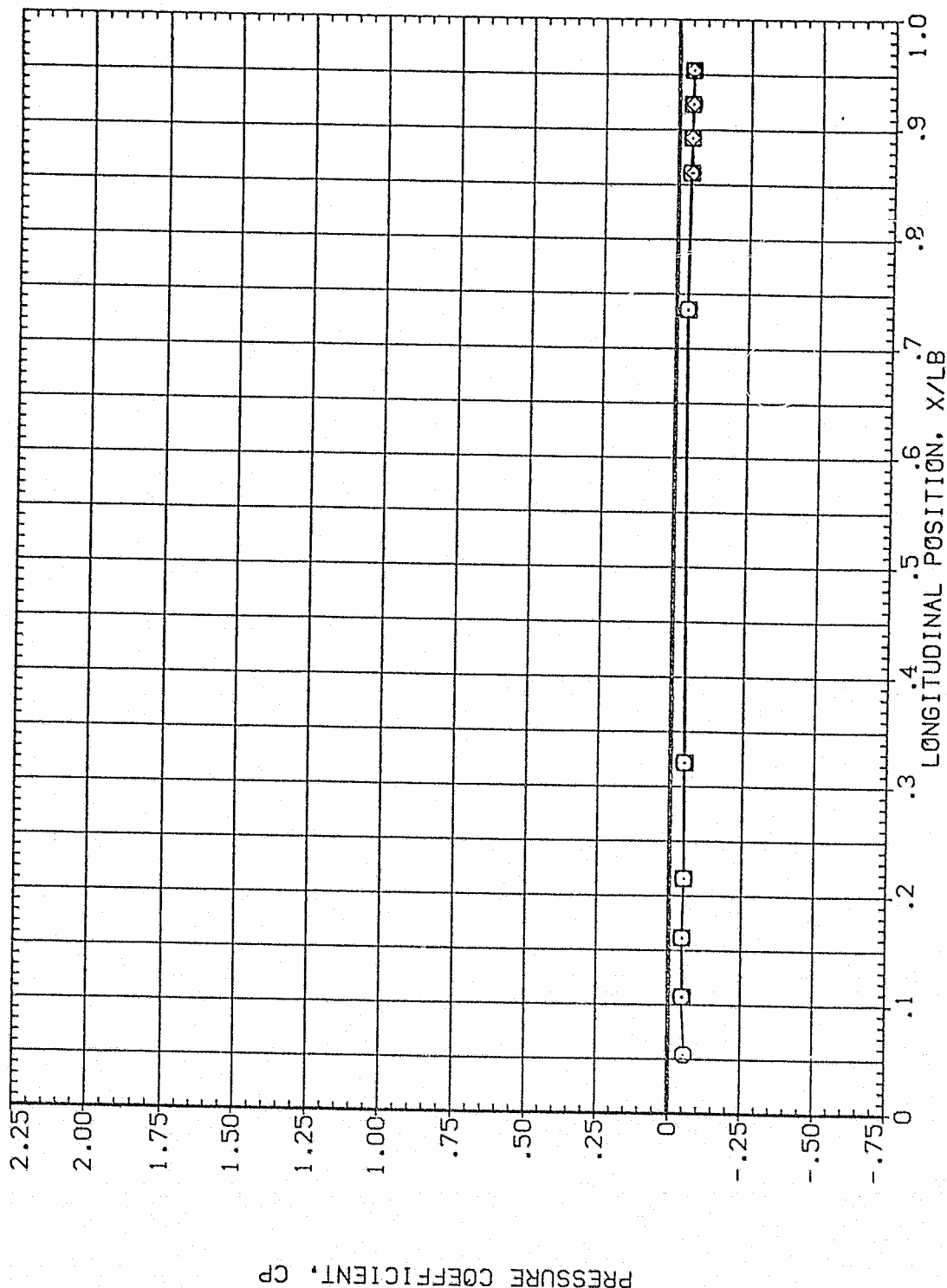


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL	PARAMETRIC VALUES		
	THETA	ALPHA	MACH
◇	45.000	97.830	3.480
□	67.500		
◇	90.000		
		BETA	90.000
		MOUNT	.000
		OFFSET	PHI
			2.000
			.000

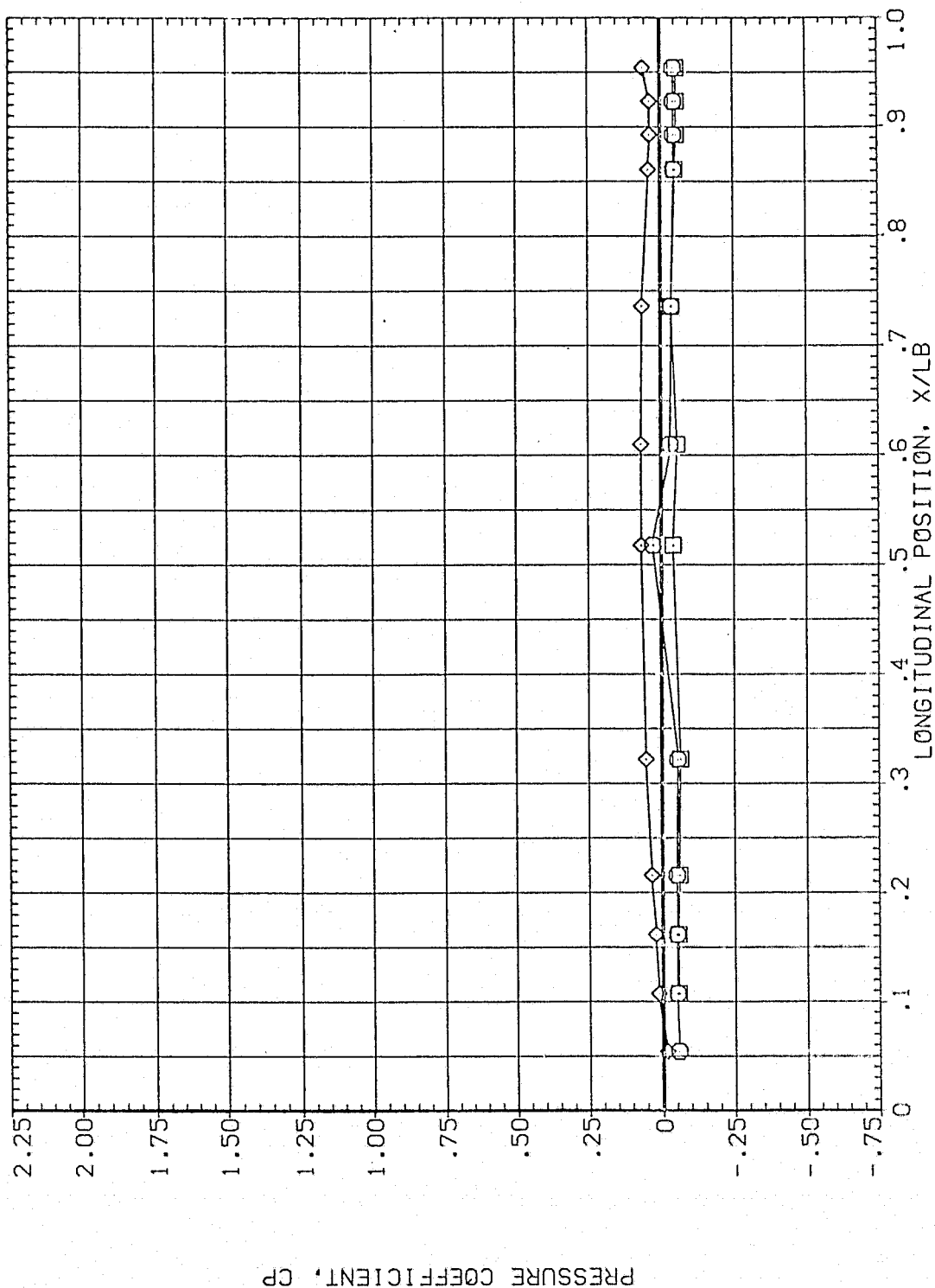


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	112.500	135.000	97.830	157.500	3.480		BETA	.000	OFFSET	90.000
○							MOUNT	2.000	PHI	.000
□										
◇										

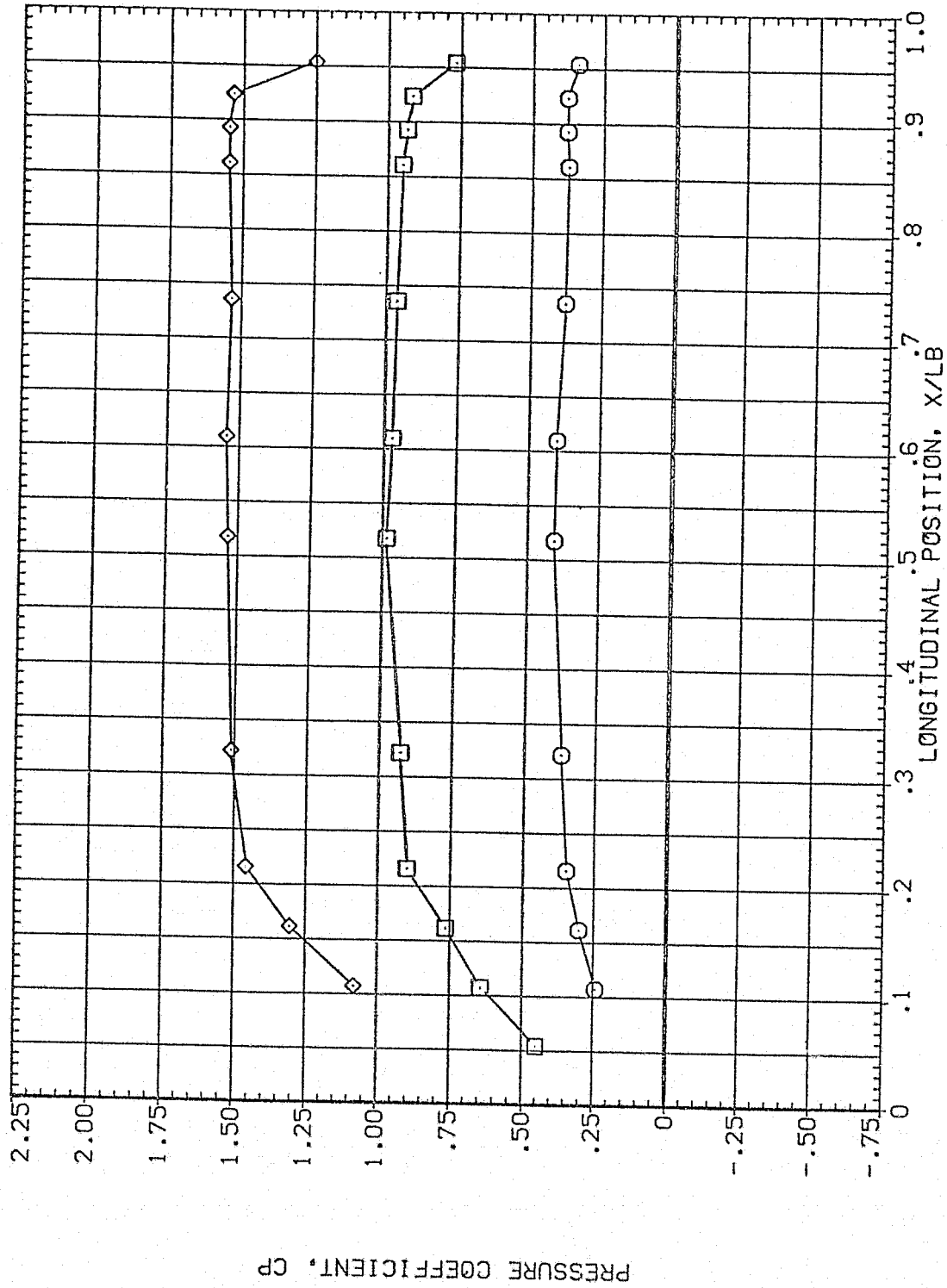


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	97.830	3.480	MOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				.000

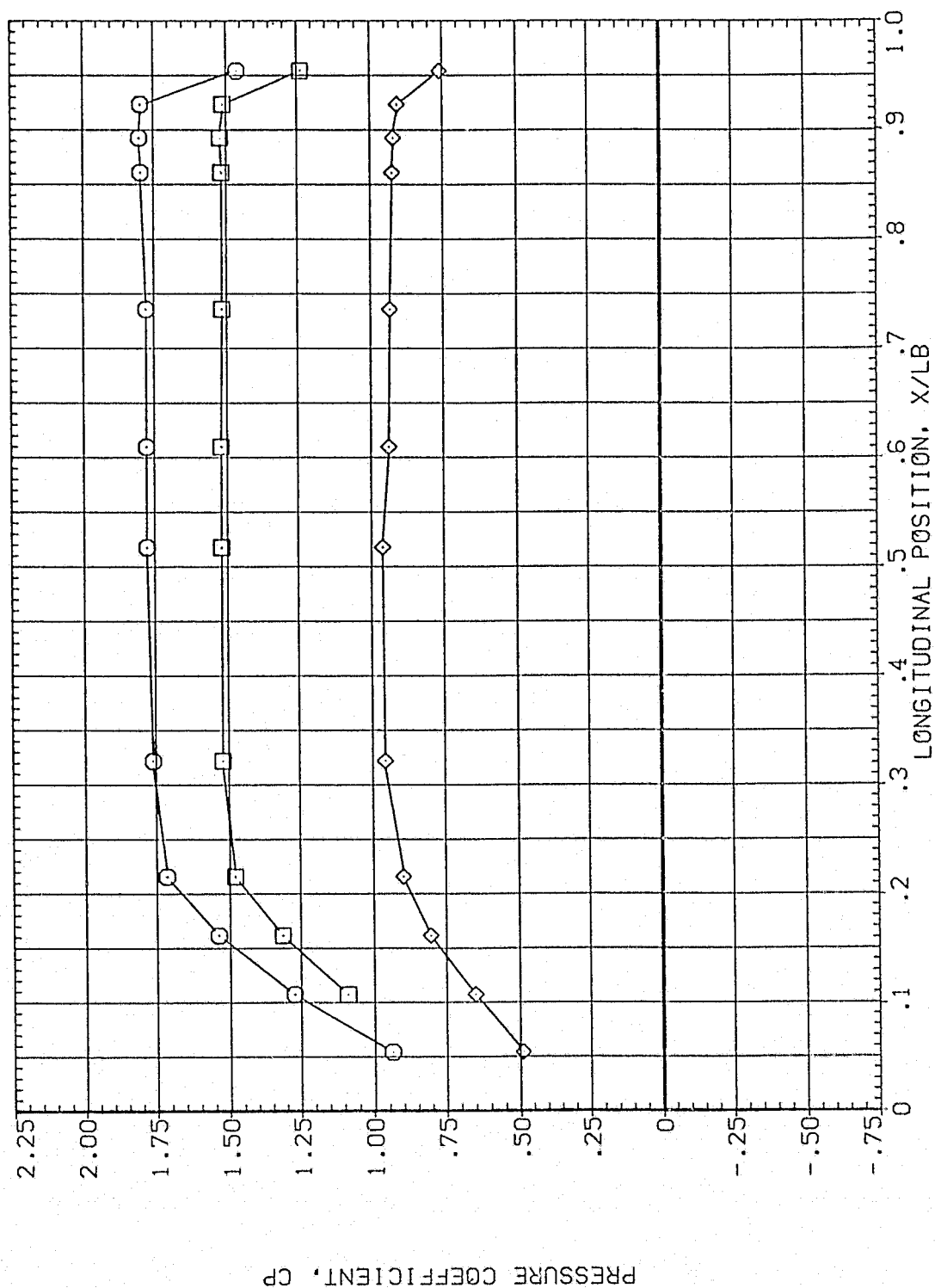


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	97.830	3.480	MOUNT	.000
□	270.000			OFFSET	.000
◇	292.500			PHI	.000

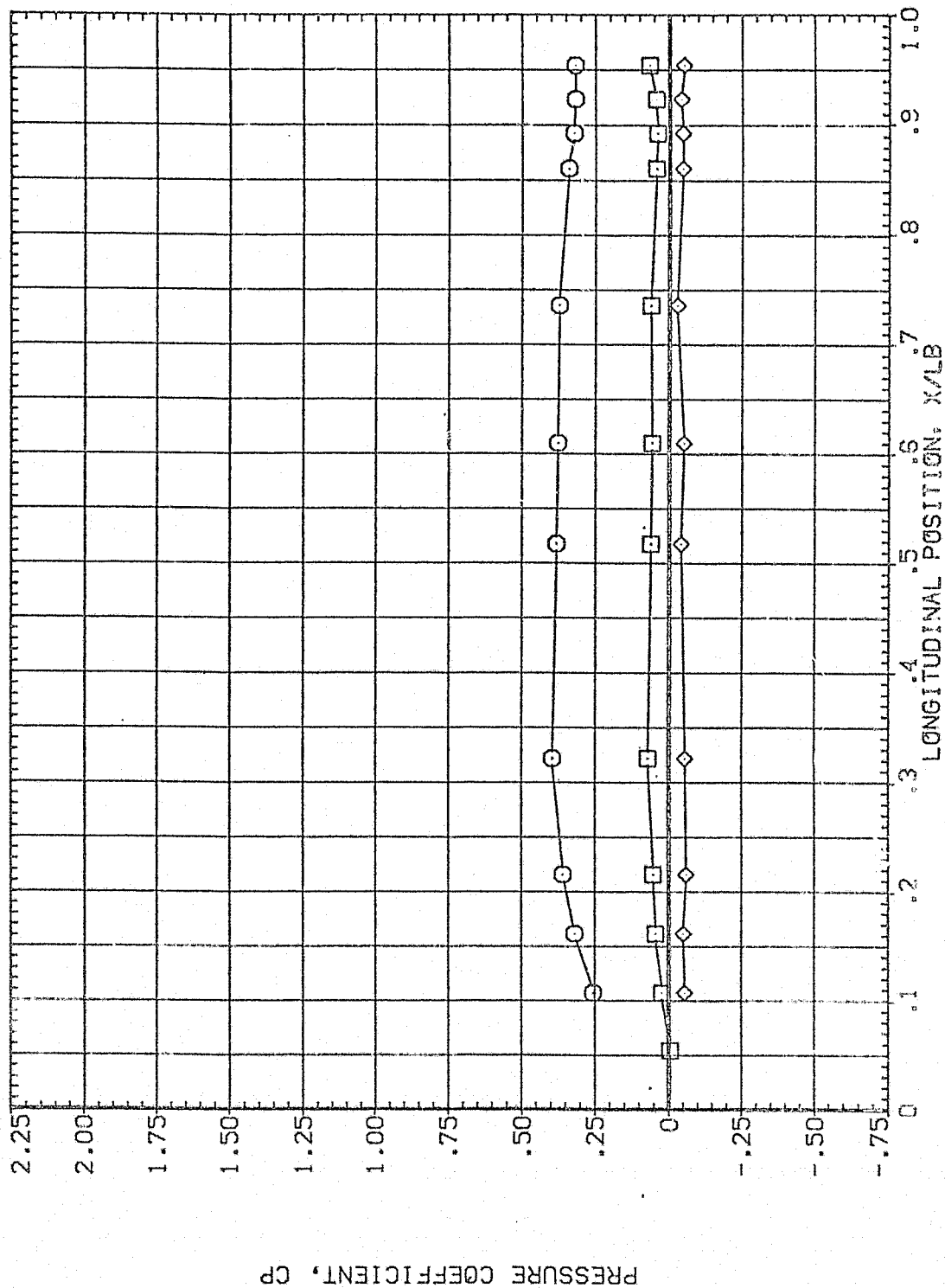


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL

THETA
315.000
326.000
346.000

ALPHA
97.830

HATCH
3.480

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
OFFSET
PHI
90.000
.000

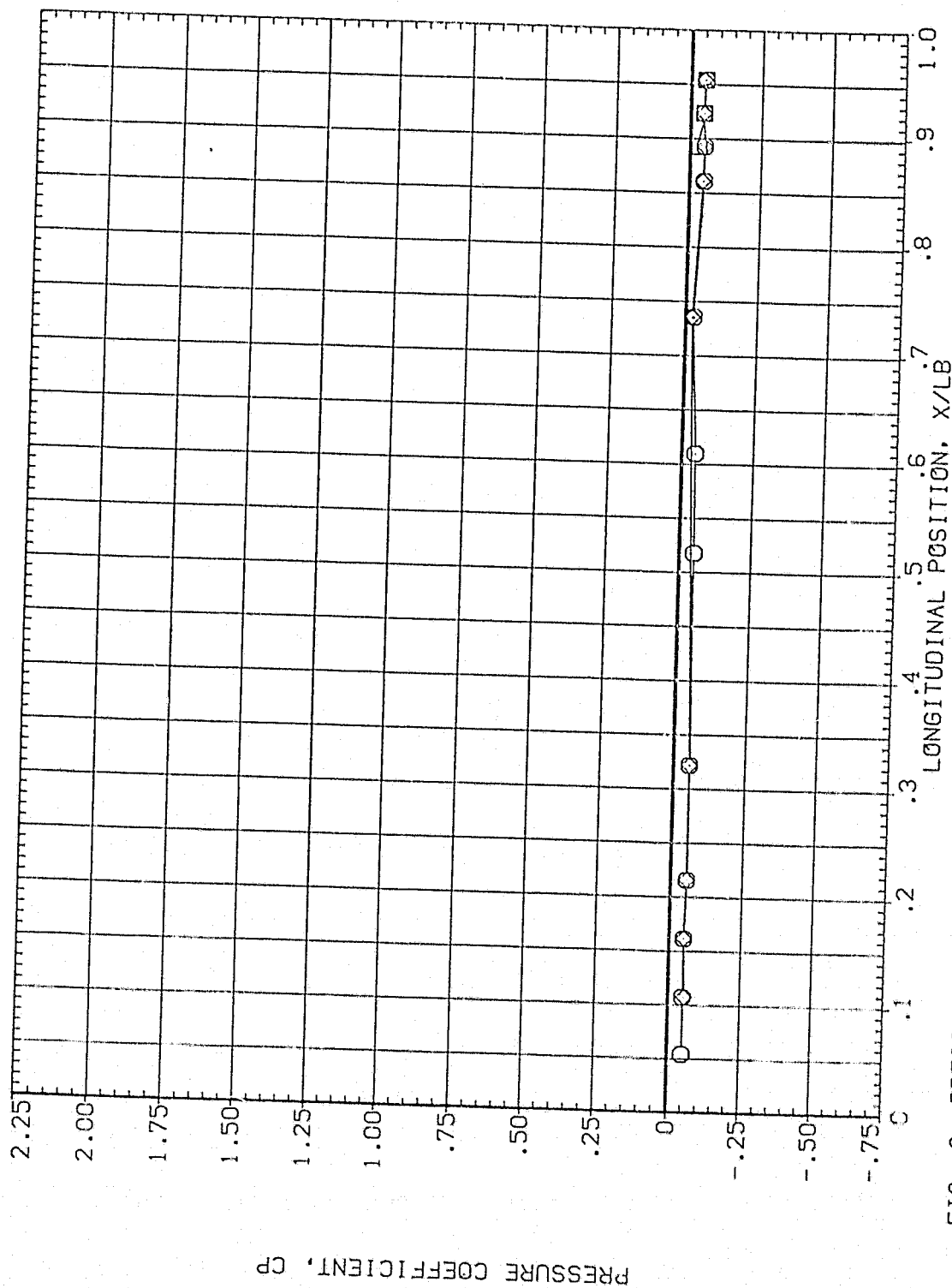


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL THETA ALPHA MACH
 □ .000 99.750 3.480
 □ 14.000
 ◇ 24.000

PARAMETRIC VALUES
 BETA .000 OFFSET 90.000
 HOURS? 2.000 PHI .000

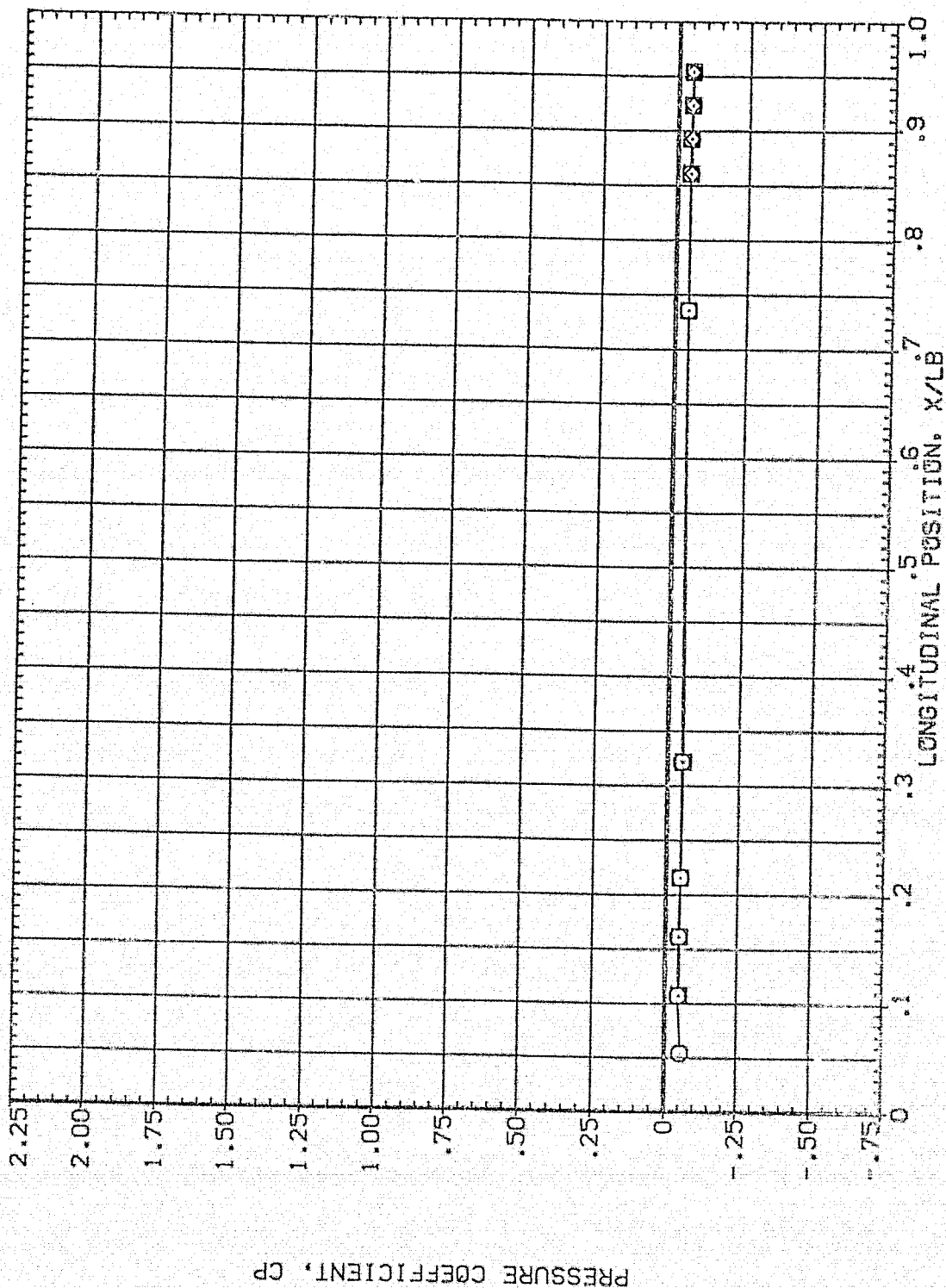


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

(PIA080)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL
◇
□
○

THETA
45.000
67.500
90.000

ALPHA
99.750

MACH
3.480

PARAMETRIC VALUES
BETA
MOUNT
90.000
2.000
OFFSET
PHI
90.000
.000

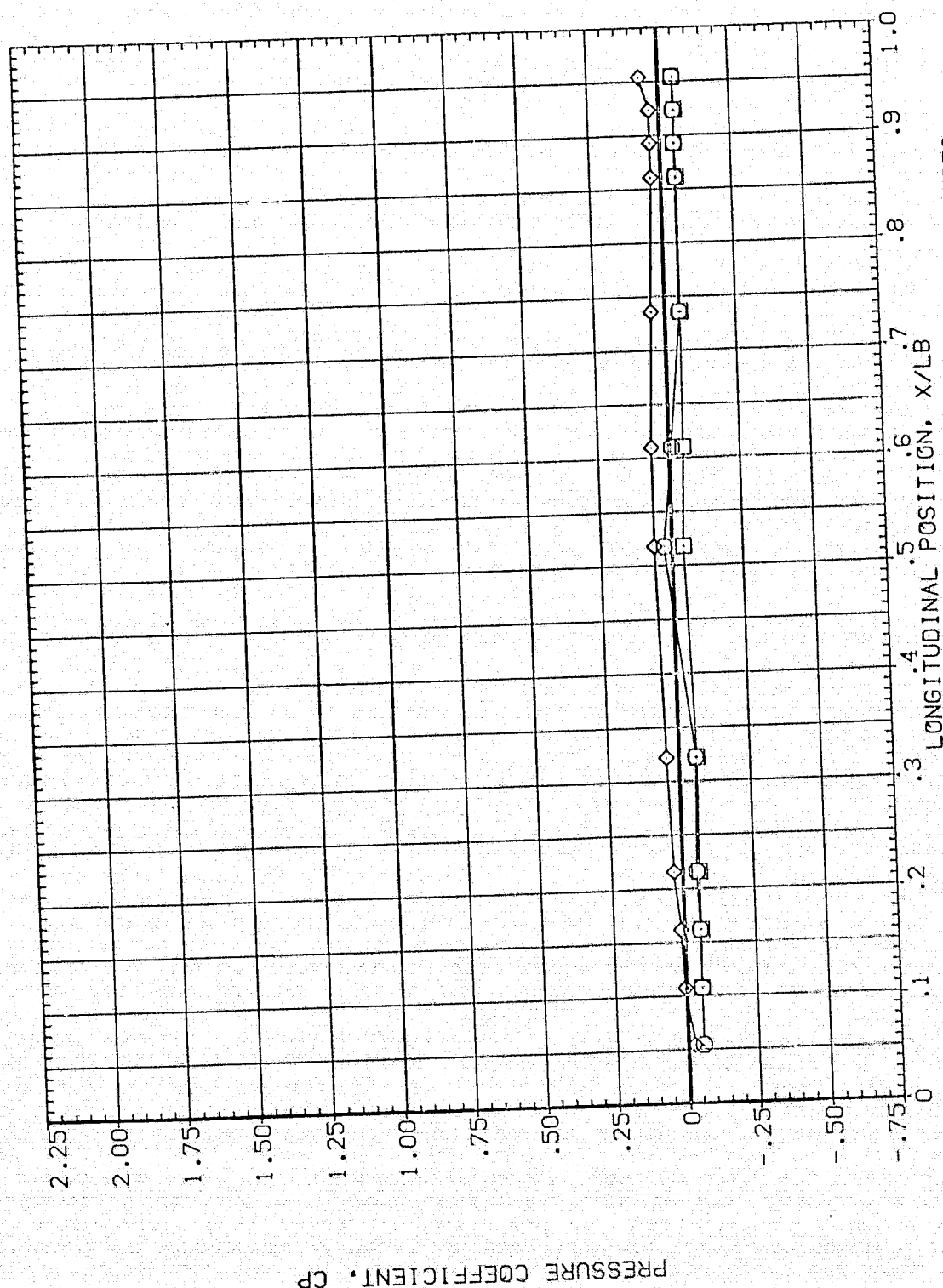


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	112.500	99.750	3.483	MOUNT	.000 OFFSET
□	135.000				2.000 PHI
◇	157.500				90.000

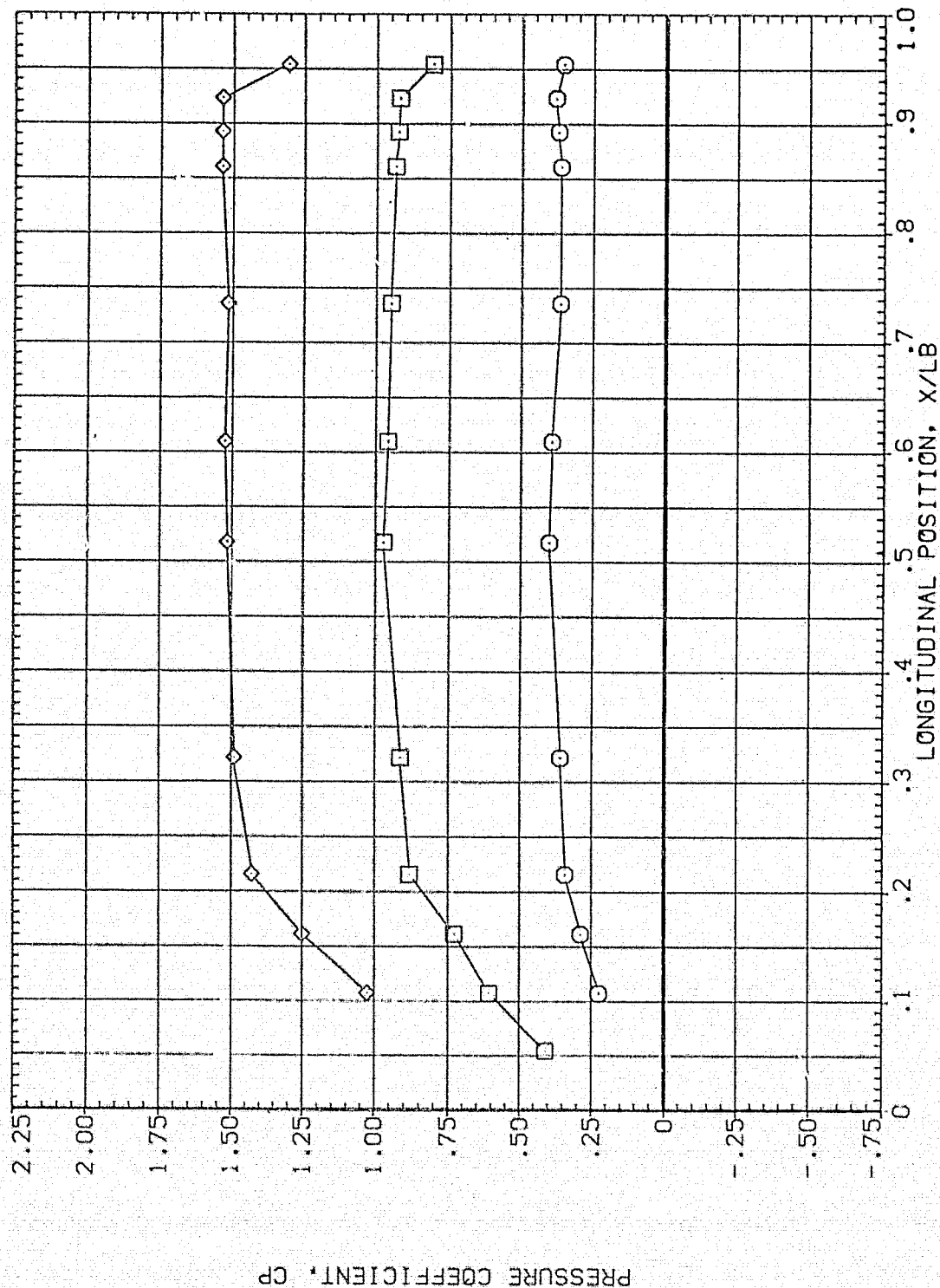


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
○ □ ◇

THETA 180.000
202.500
225.000
ALPHA 99.750
MACH 3.480

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
PHI 90.000
.000
.000

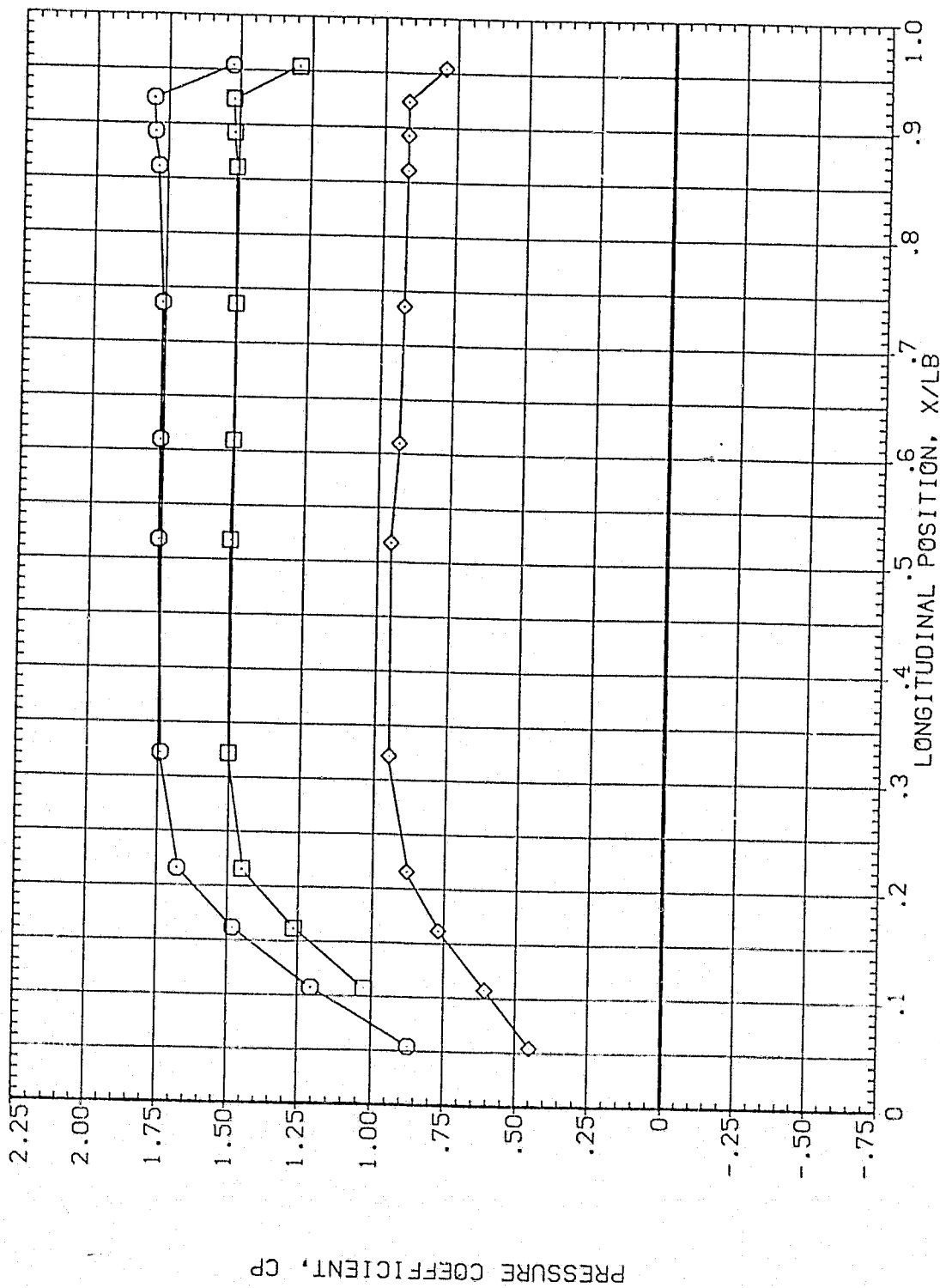


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	99.750	3.480	MOUNT	.000
□	270.000				2.000
◇	292.500				PHI
					90.000
					.000

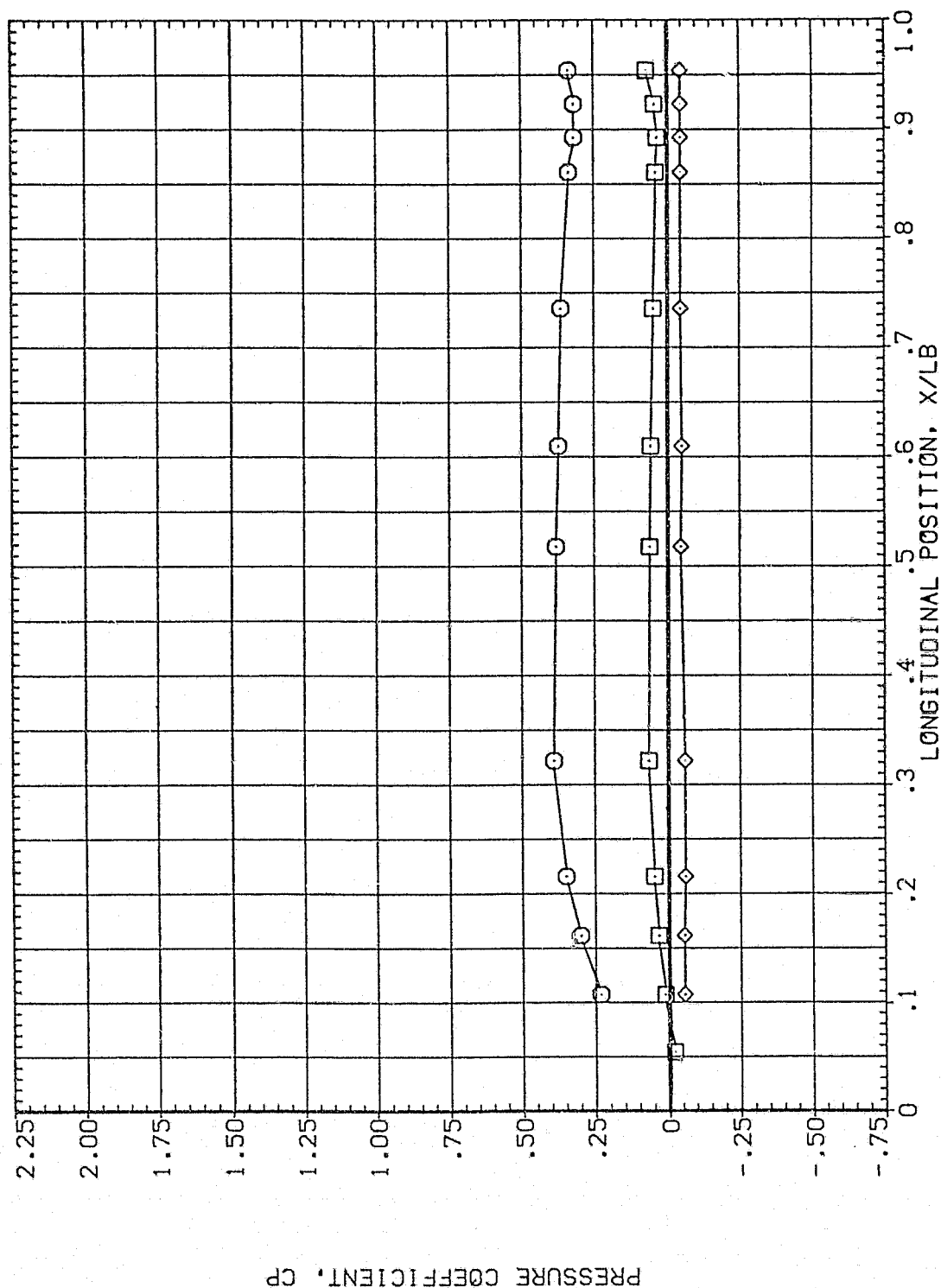


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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SYMBOL THETA ALPHA MACH
 ○ 315.000 99.750 3.480
 □ 326.000
 ◇ 346.000

PARAMETRIC VALUES
 BETA .000 OFFSET 90.000
 MOUNT 7.000 PHI .000

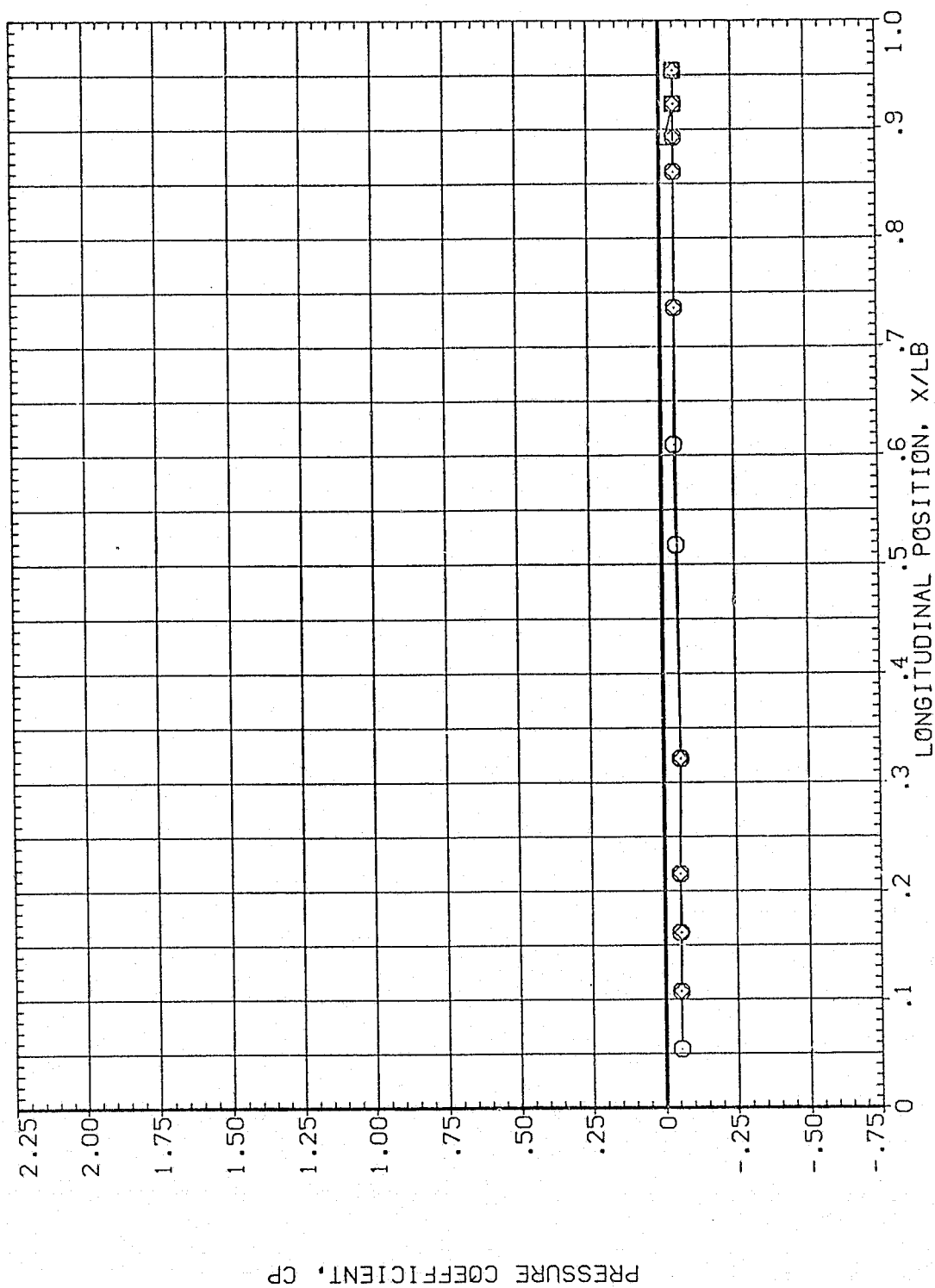


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL	THETA	ALPHA	HACH	BETA	PARAMETRIC VALUES
○	.000	51.000	4.960	MOUNT	.000
□	14.000				2.000
◇	24.000				60.000
					PHI
					.000

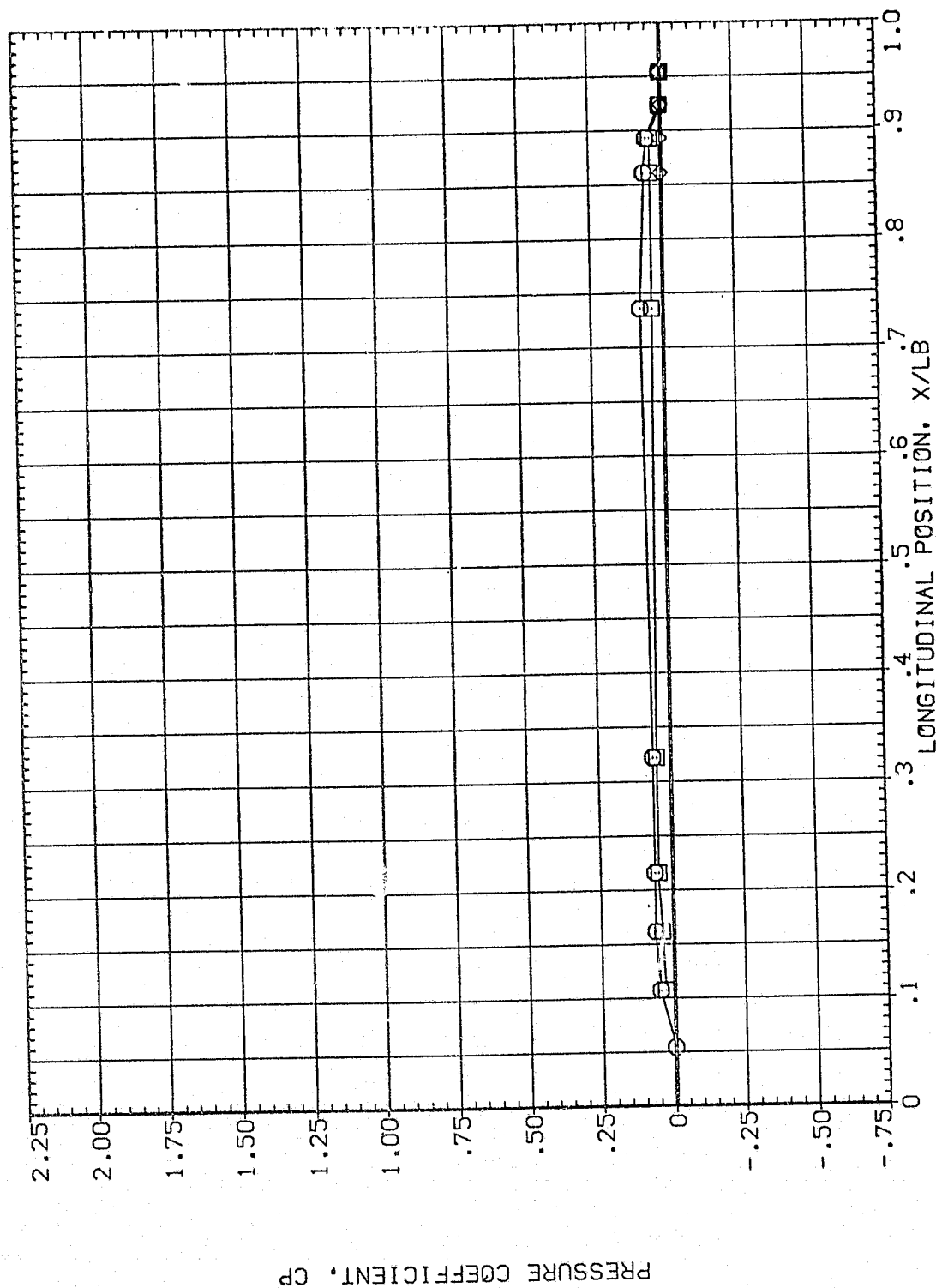


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
 ◇
 □
 ○

THETA
 45.000
 67.500
 90.000

ALPHA
 51.000

MACH
 4.960

PARAMETRIC VALUES
 .000 .000
 2.000 PHI

BETA
 MOUNT

50.000
 .000

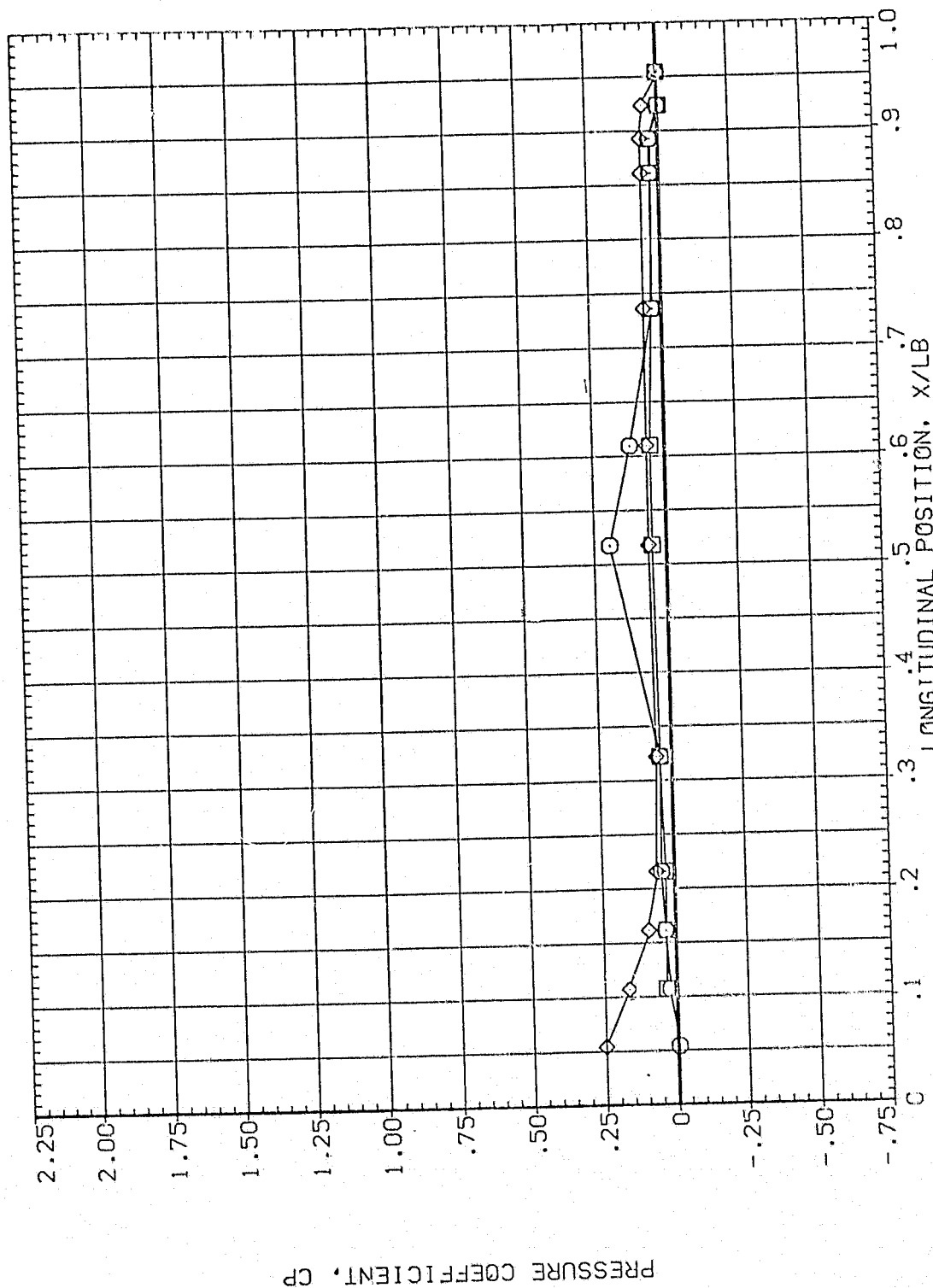


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	51.000	4.960	HOUNT	.000	.000
□	135.000				2.000	
◇	157.500					60.000

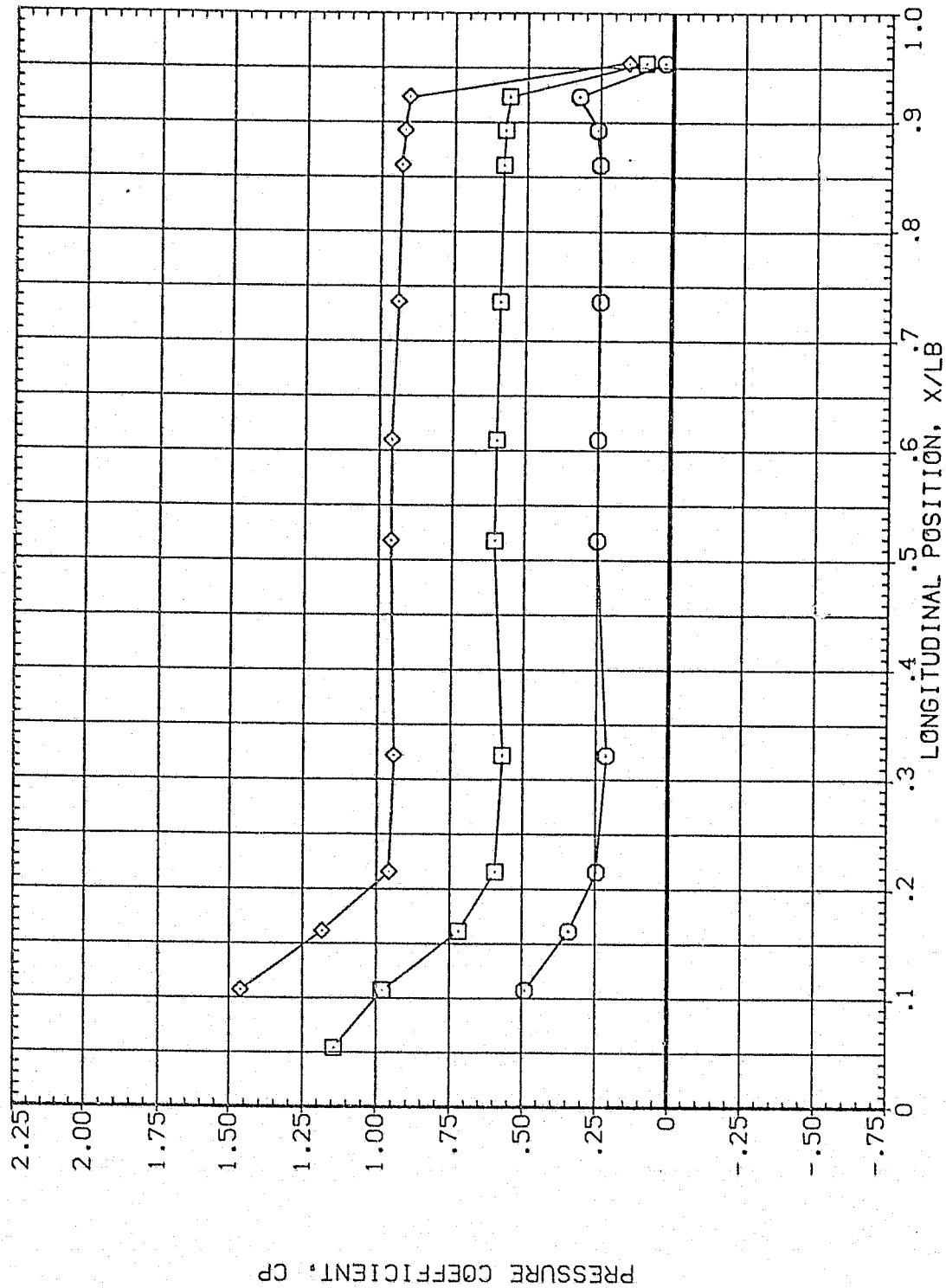


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	51.000	4.960	HEIGHT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				60.000

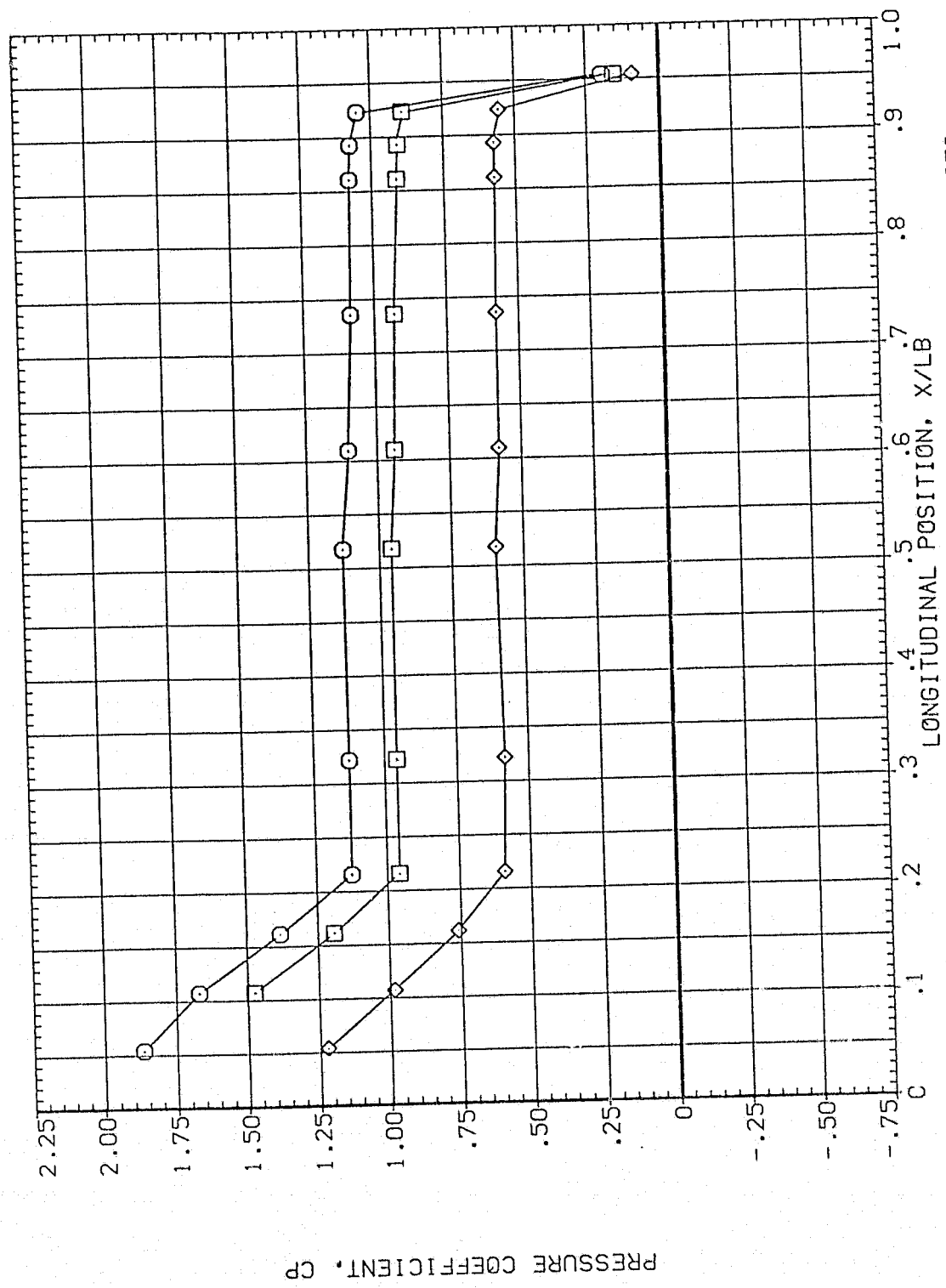


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL
 ○
 □
 ◇

THETA
 247.500
 270.000
 292.500

ALPHA
 51.000

MACH
 4.960

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 .000
 .000
 OFFSET
 PHI

60.000
 .000

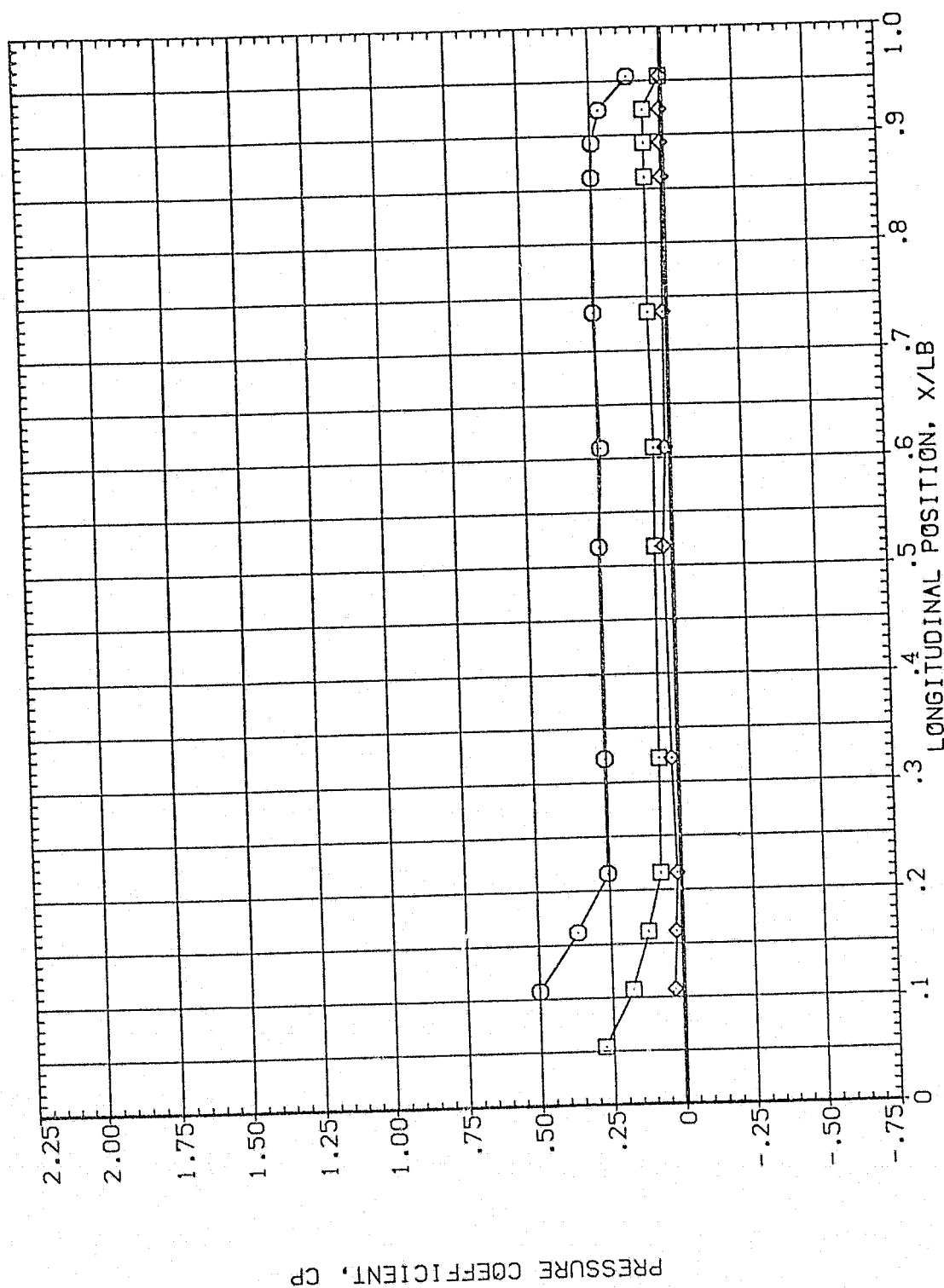


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

(P1A061)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL THETA ALPHA MACH
◇ 315.000 51.000 4.960
□ 326.000
○ 346.000

PARAMETRIC VALUES
BETA .000 OFFSET 60.000
MOUNT 2.000 PHI .000

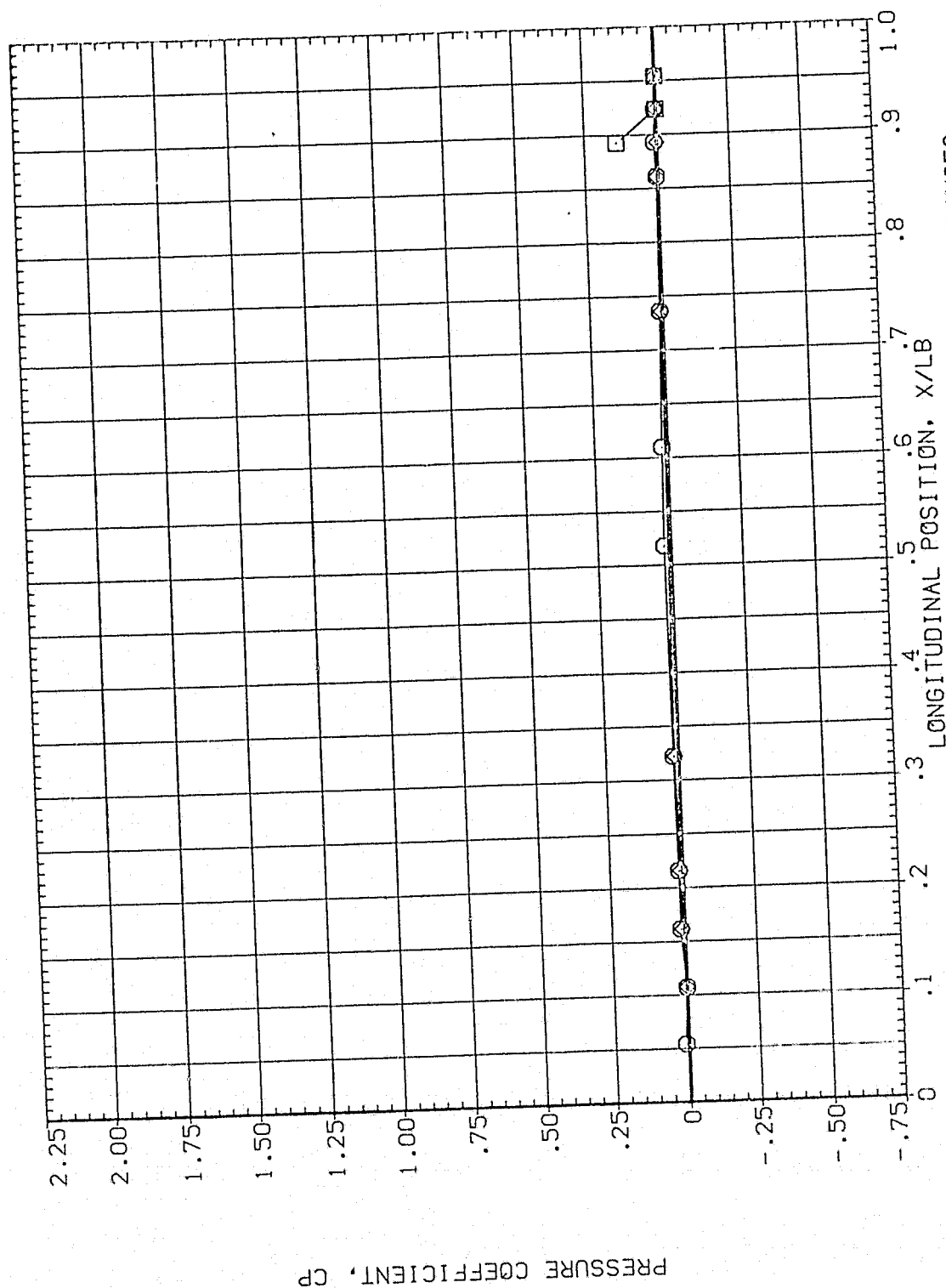


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	.000	54.130	4.960	MOUNT	.000 OFFSET
◇	14.000				2.000 PHI
	24.000				60.000

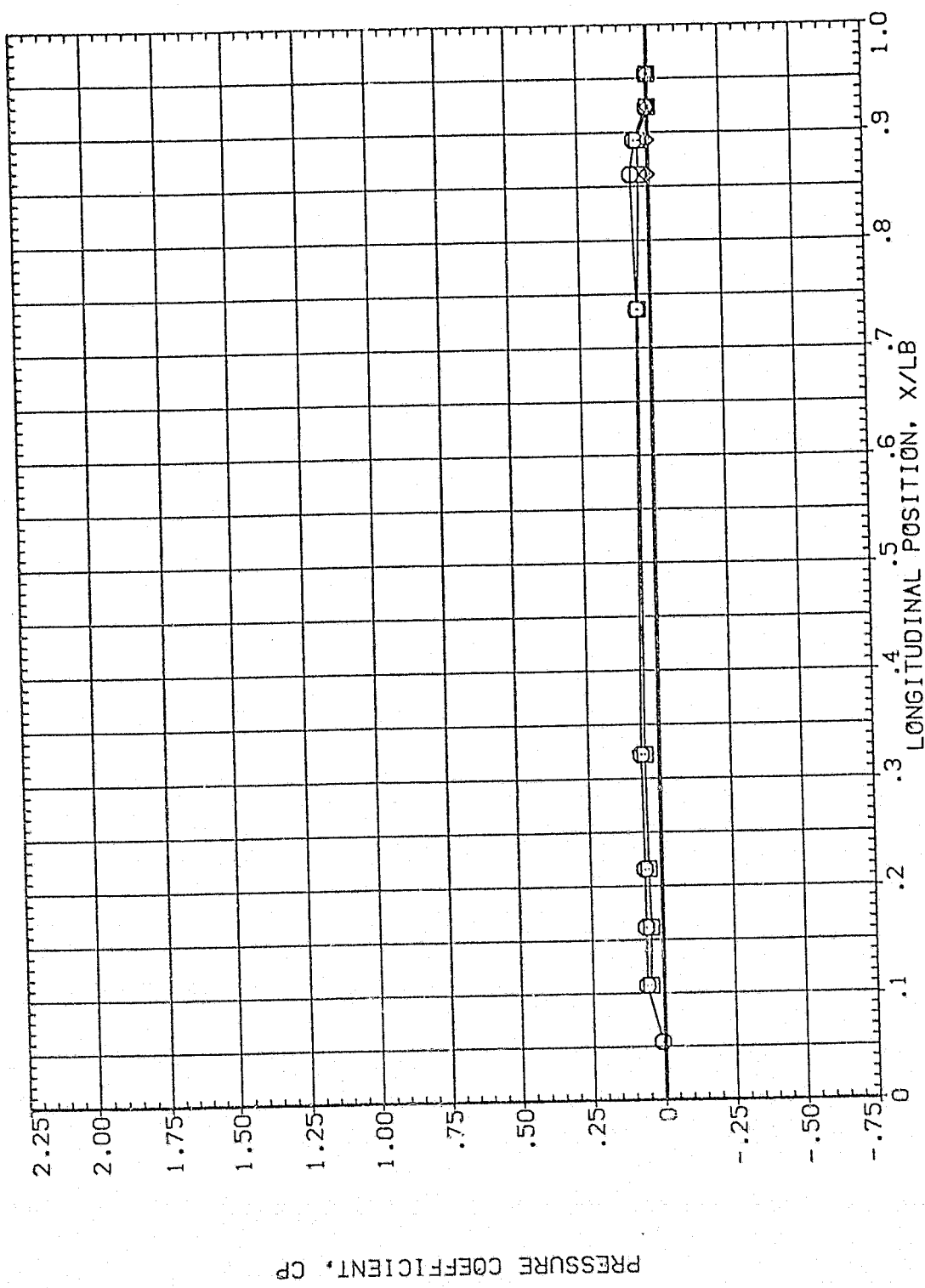


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

(P1A062)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL
◇
□
○

THETA
45.000
67.500
90.000

ALPHA
54.130

MACH
4.960

PARAMETRIC VALUES

BETA
MOUNT

.000
2.000

OFFSET
PHI

60.000
.000

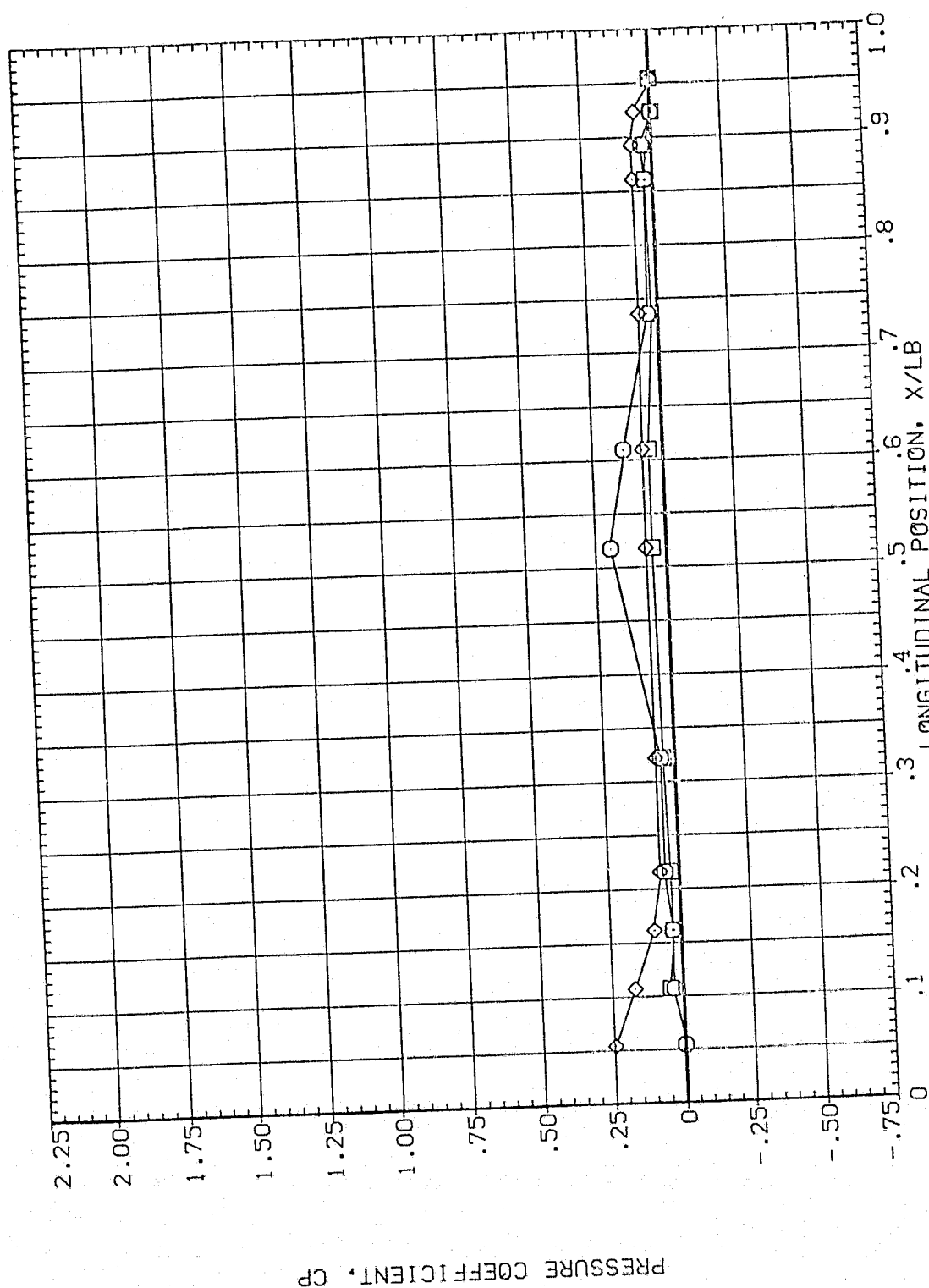


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	54.130	4.960	2.000	.000	.000
□	135.000					
◇	157.500					

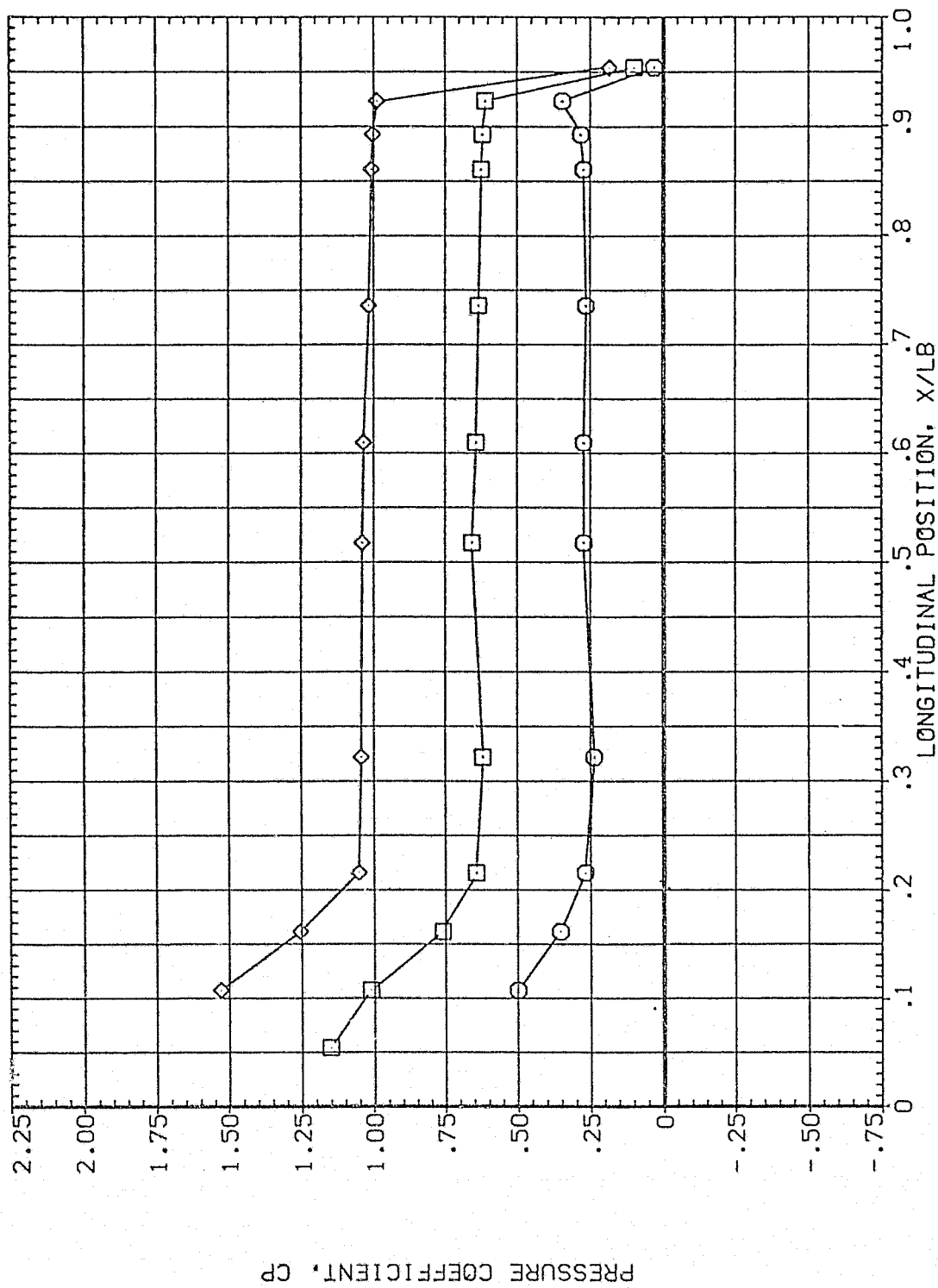


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	180.000	54.130	4.960	2.000	.000	.000
□	202.500			2.000	.000	.000
◇	225.000			2.000	.000	.000

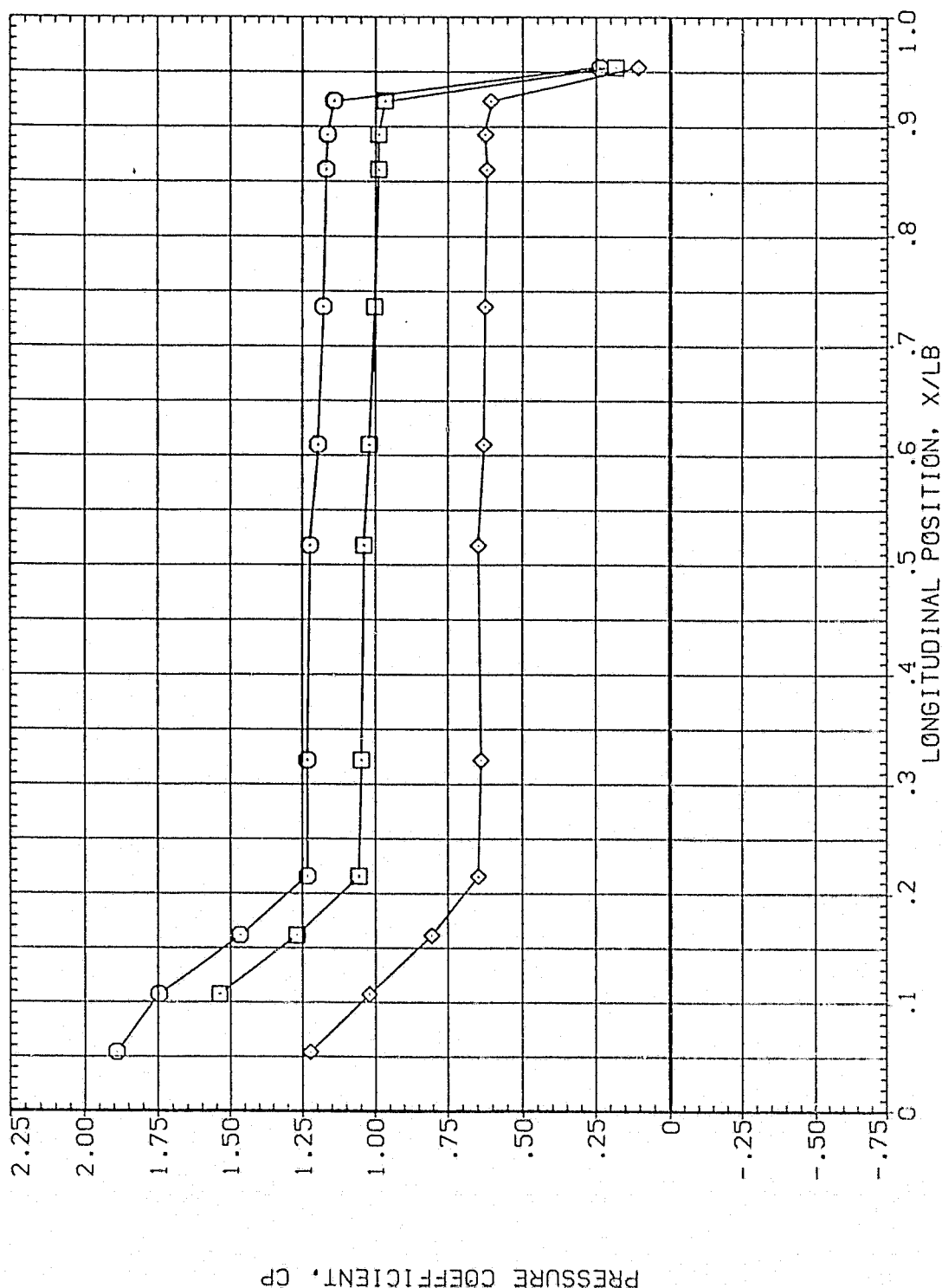


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	54.130	4.960	.000	.000	.000
□	270.000			2.000		
◇	292.500					

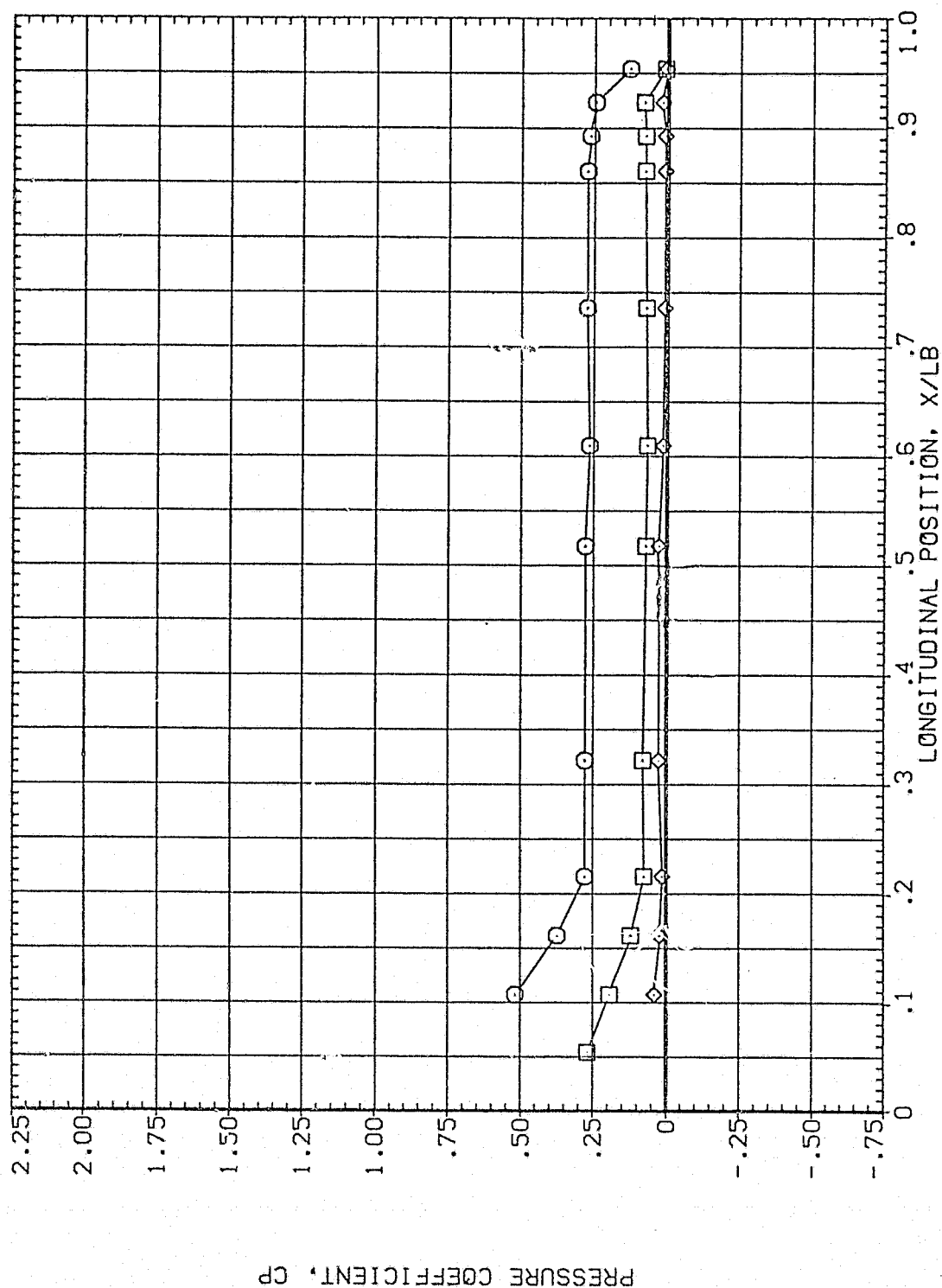


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
◇	315.000	54.130	4.960	MCOUNT	2.000	PHI
◇	326.000					.000
◇	346.000					

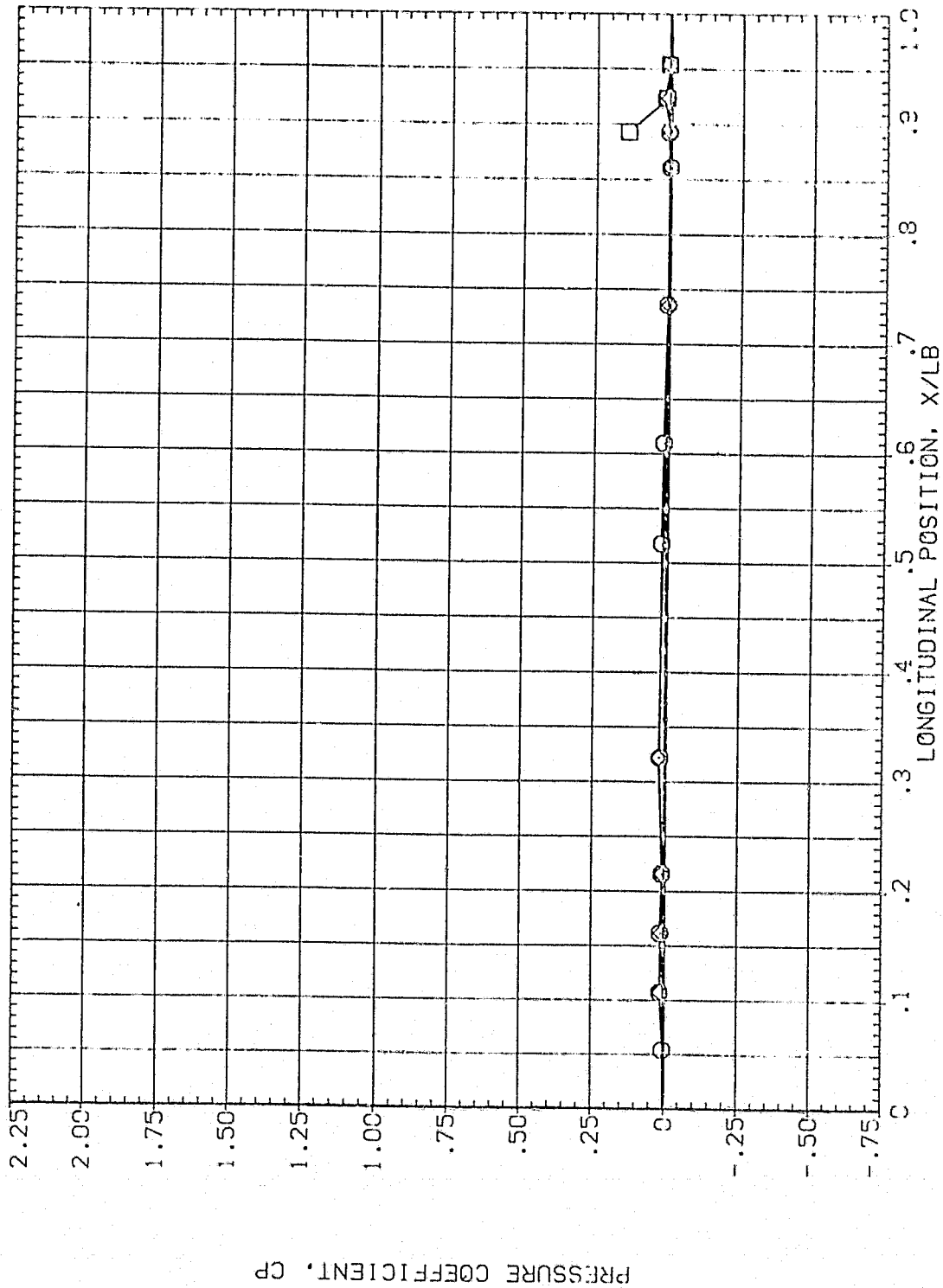


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES



MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL
○
□
◇

THETA
.000
14.000
24.000

ALPHA
57.130

MACH
4.960

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
OFFSET
PHI

60.000
.000

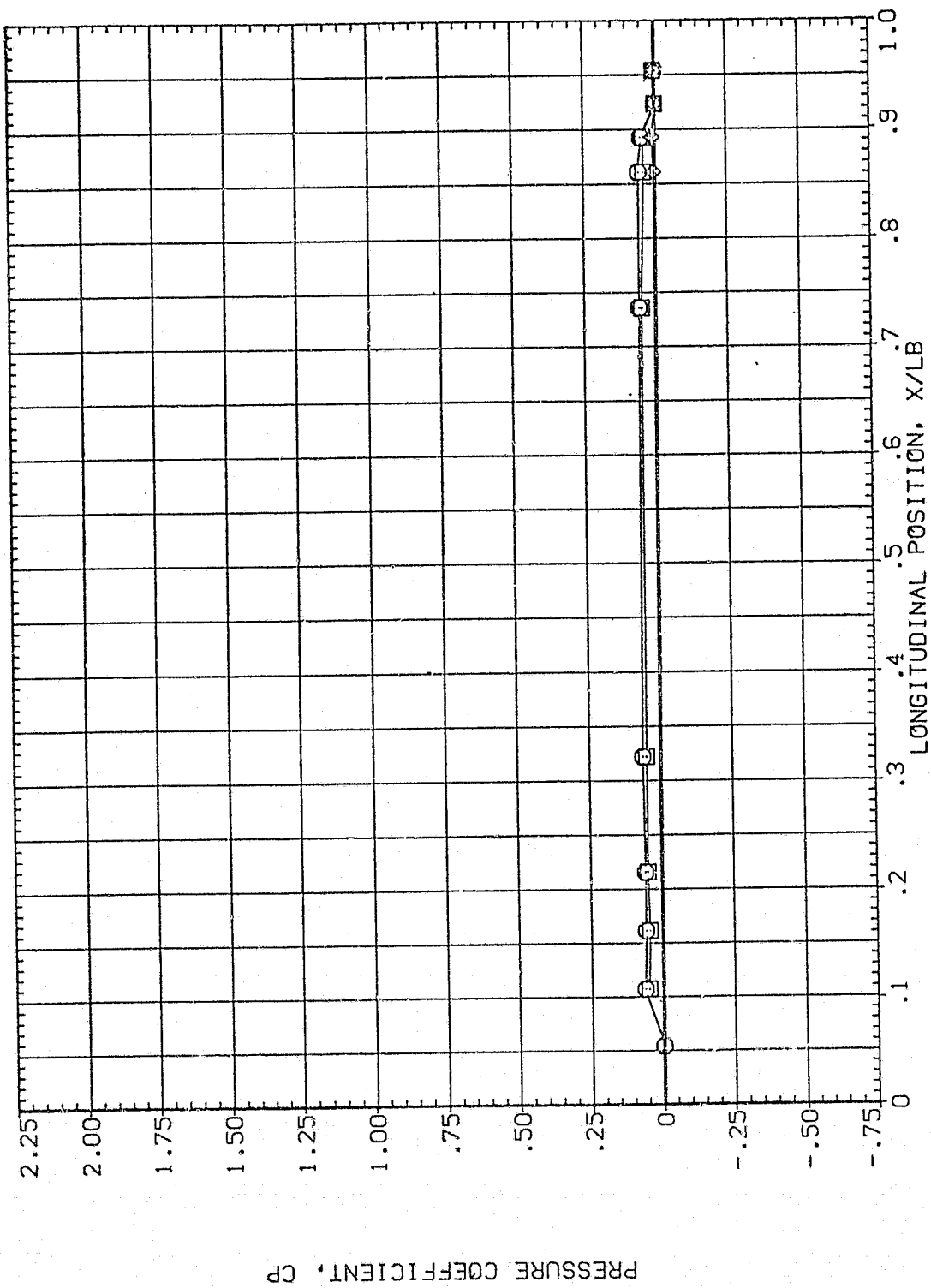


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA063)

SYMBOL
 ○
 □
 ◇

THETA
 45.000
 67.500
 90.000

ALPHA
 57.130

MACH
 4.960

PARAMETRIC VALUES
 .000 OFFSET
 2.000 PHI

60.000
 .000

BETA
 MOUNT

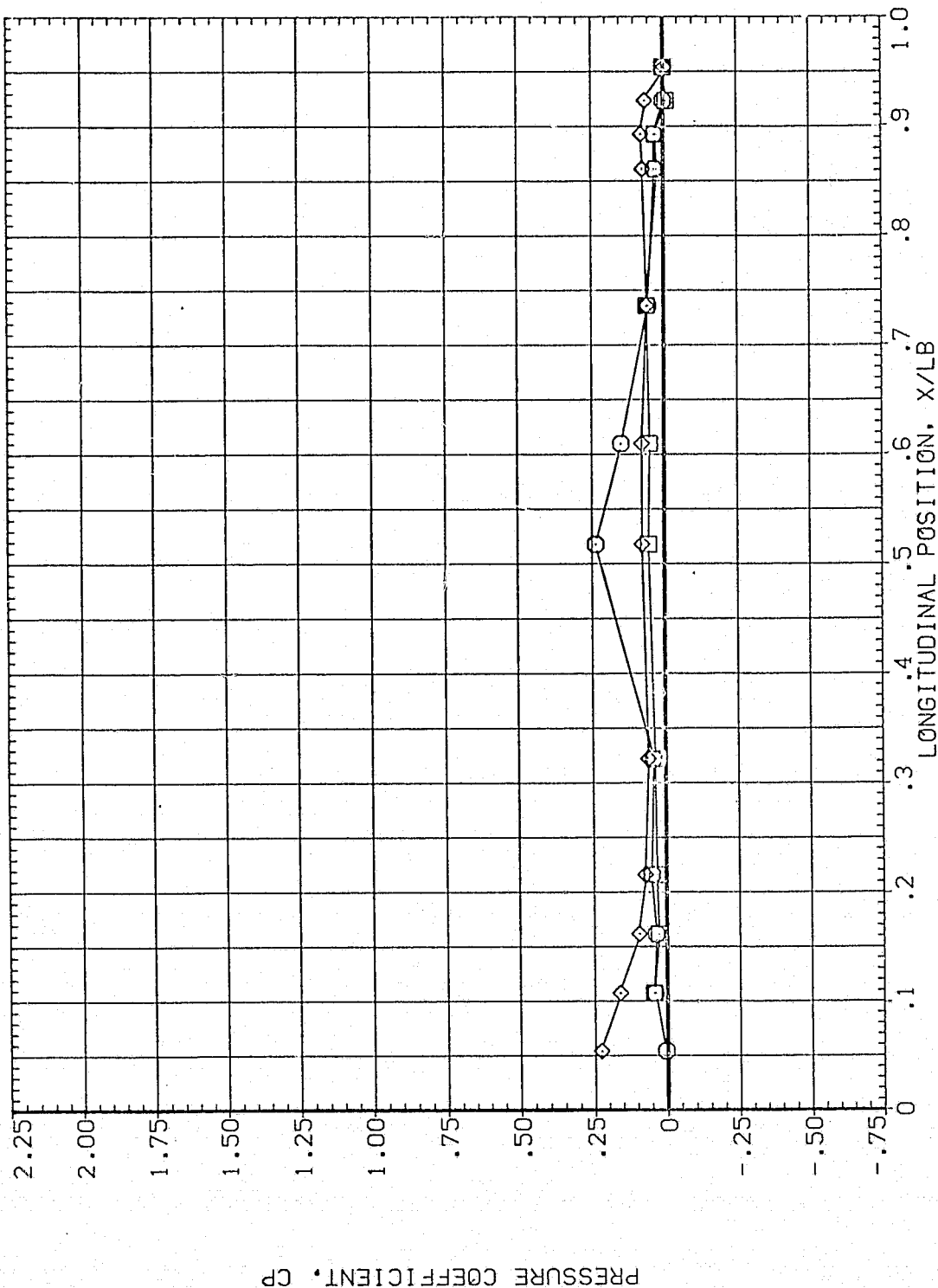


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 76 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	.000	60.000
○	112.500	57.130	4.960	Mount	2.000	PHI
□	135.000					
◇	157.500					

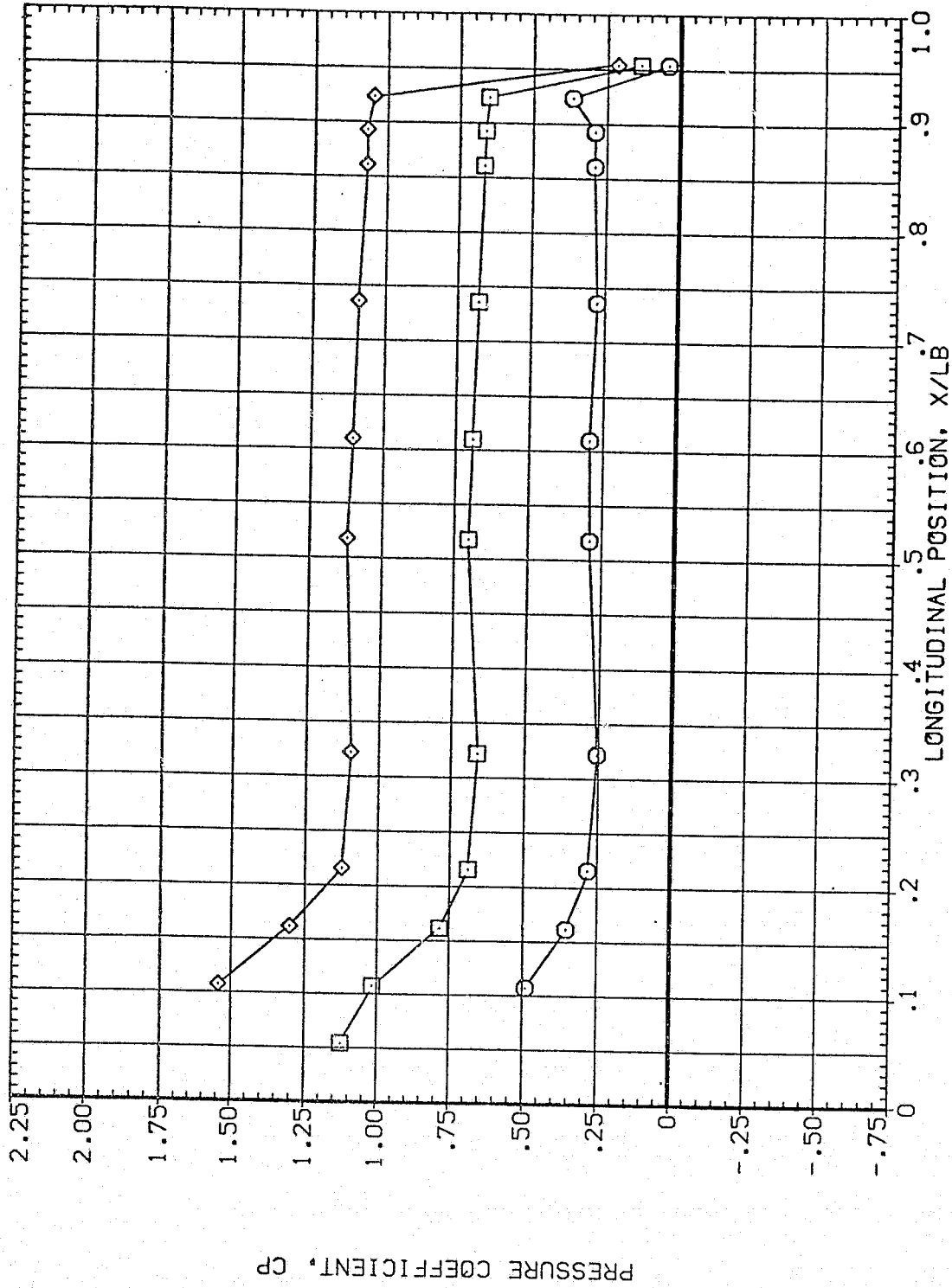


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	57.130	4.960	MOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				60.000 .000

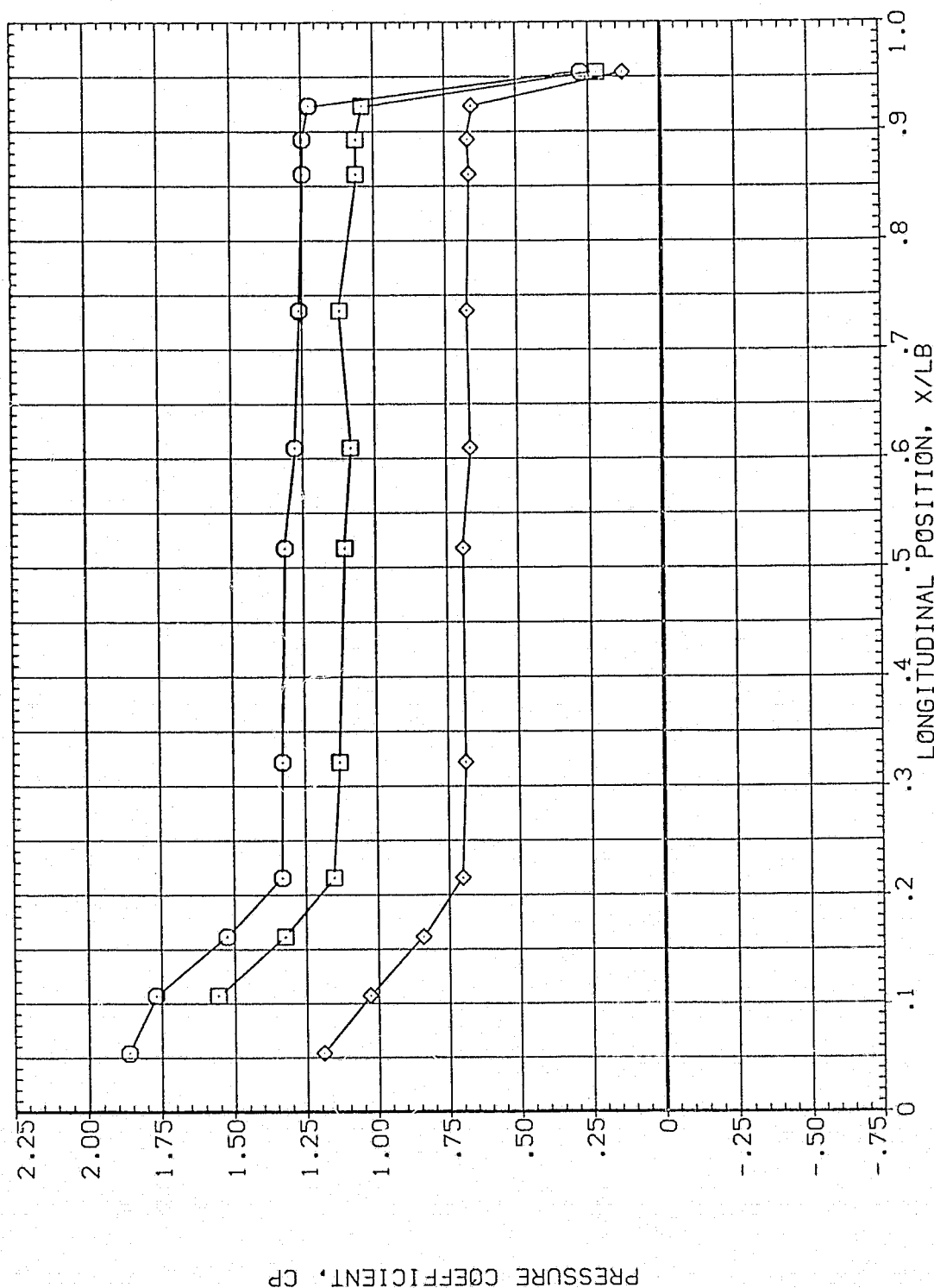


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	57.130	4.960	MOUNT	.000 OFFSET
□	270.000				2.000 PHI
◇	292.500				50.000

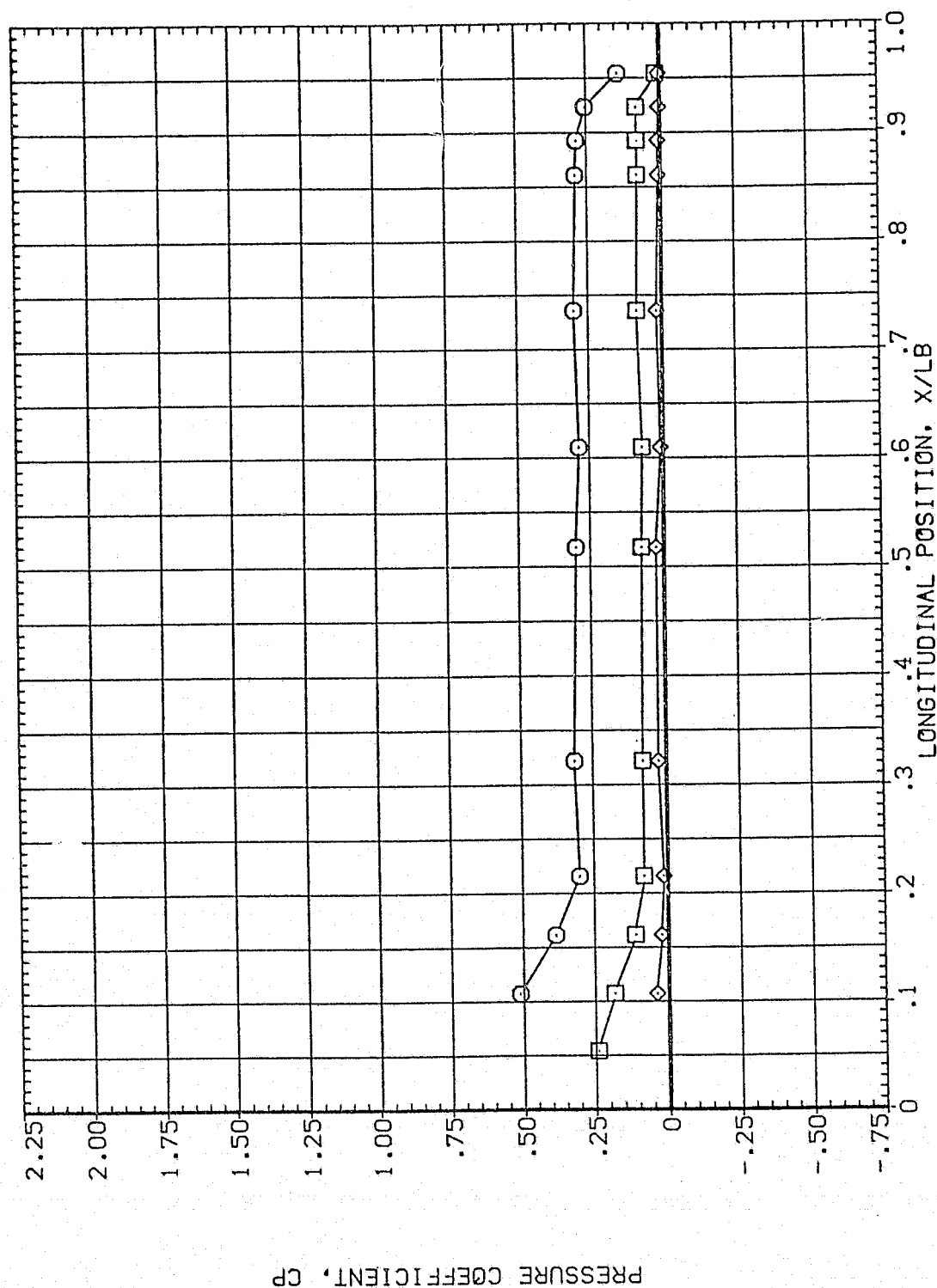


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	57.130	4.960	OUNT	.000 OFFSET
□	326.000				2.000 PHI
◇	346.000				60.000

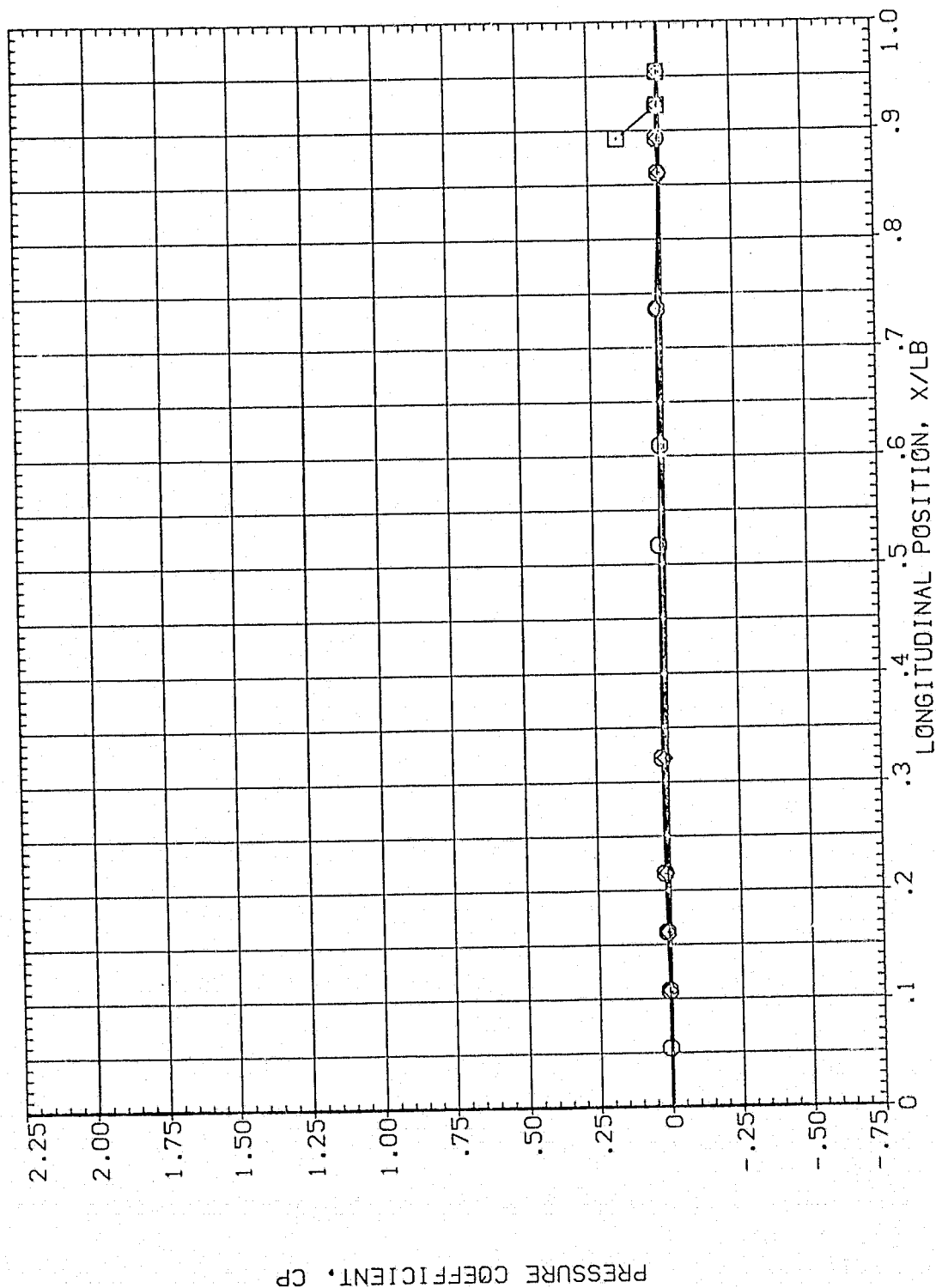


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	PARAMETRIC VALUES		
	THETA	ALPHA	HACH
○	.000	60.130	4.960
□	14.000		
◇	24.000		
		BETA	OFFSET
		MOUNT	PHI
			60.000
			.000

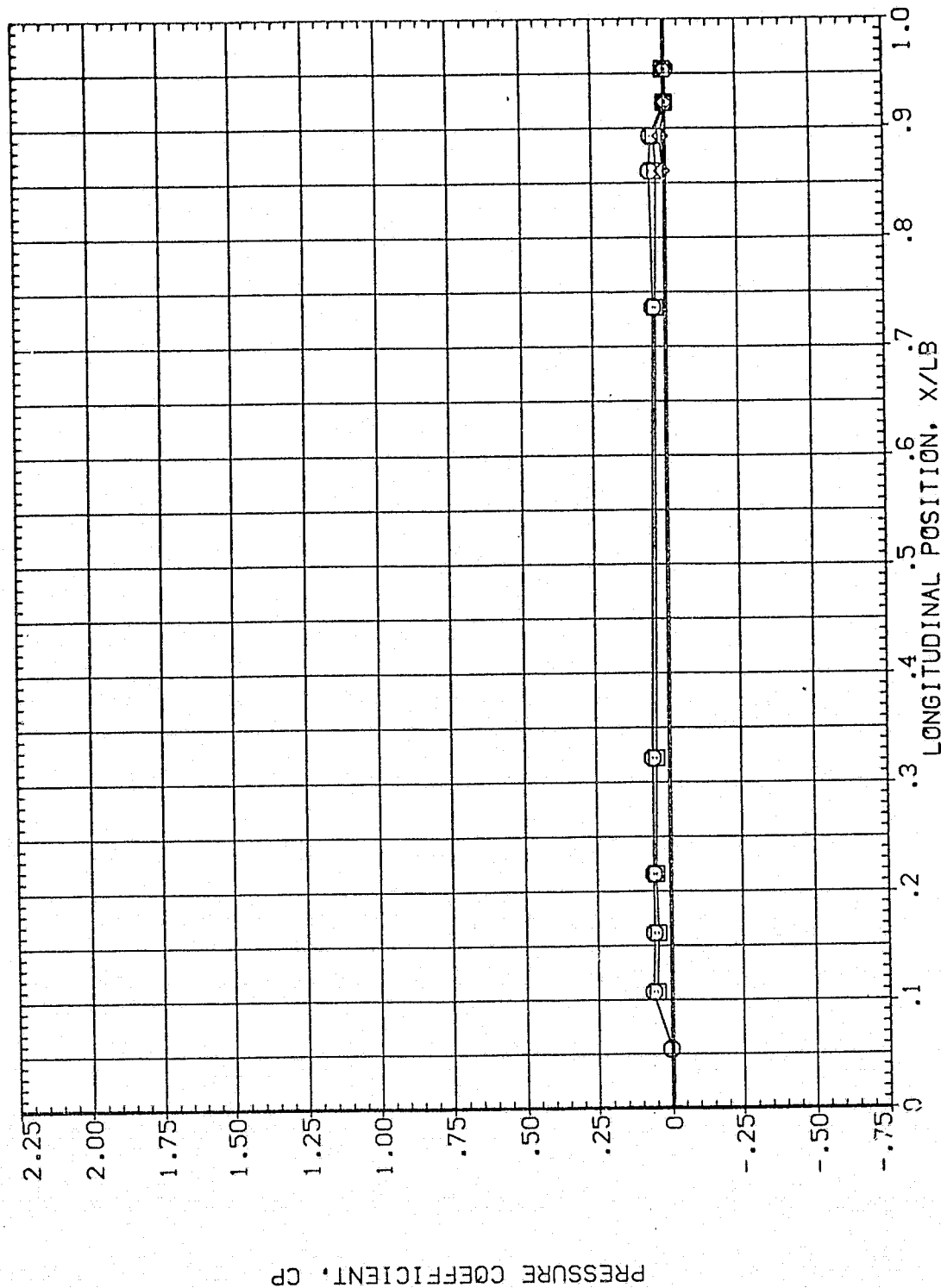


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	THETA		ALPHA	MACH	PARAMETRIC VALUES			
	45.000	60.130	60.130	4.960	BETA	.000	OFFSET	60.000
○	67.500				MOUNT	2.000	PHI	.000
□	90.000							
◇								

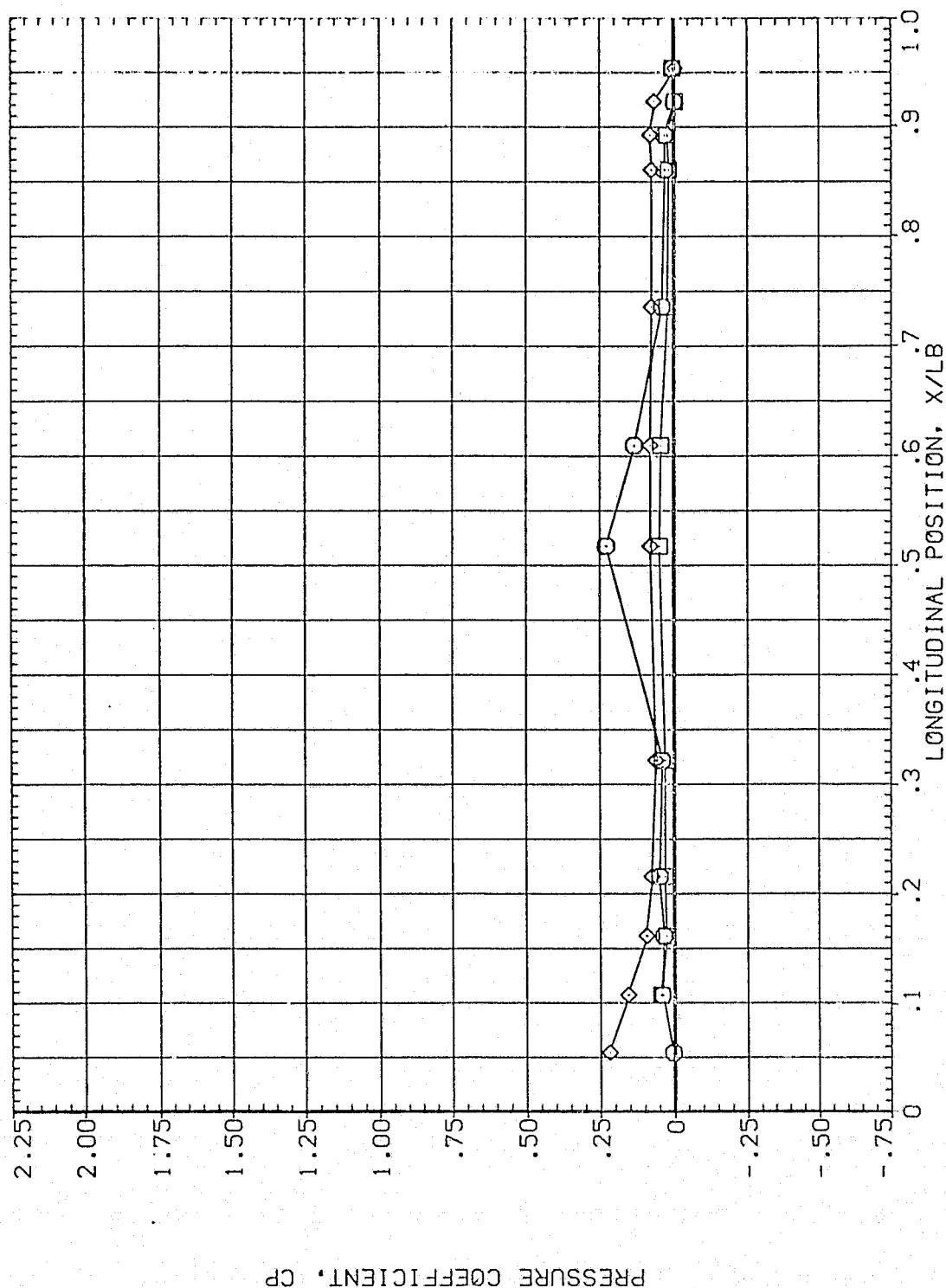


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	60.130	4.960	HOUNT	.000	.000
□	135.000					
◇	157.500					

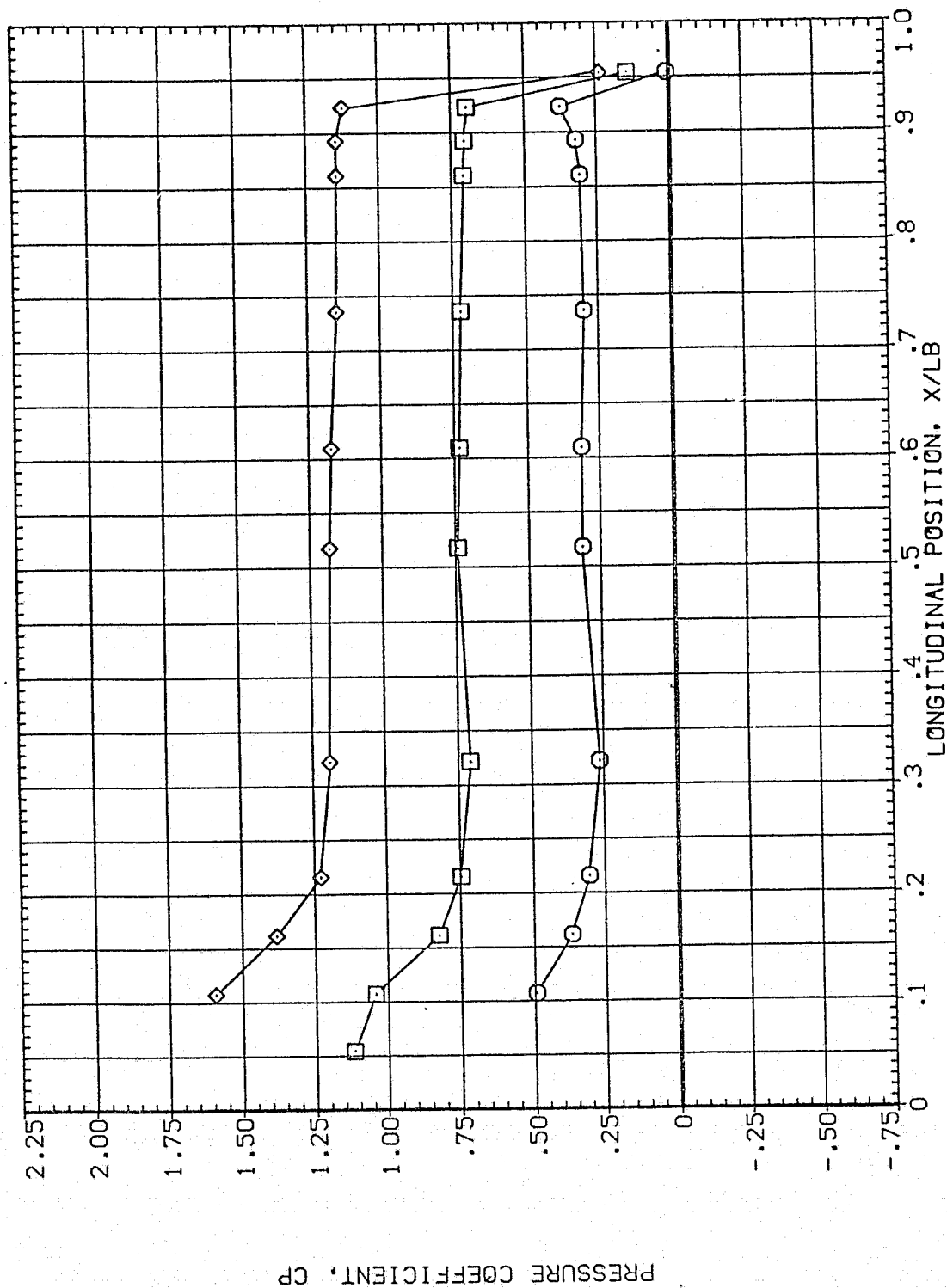


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	60.130	4.960	MOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				60.000

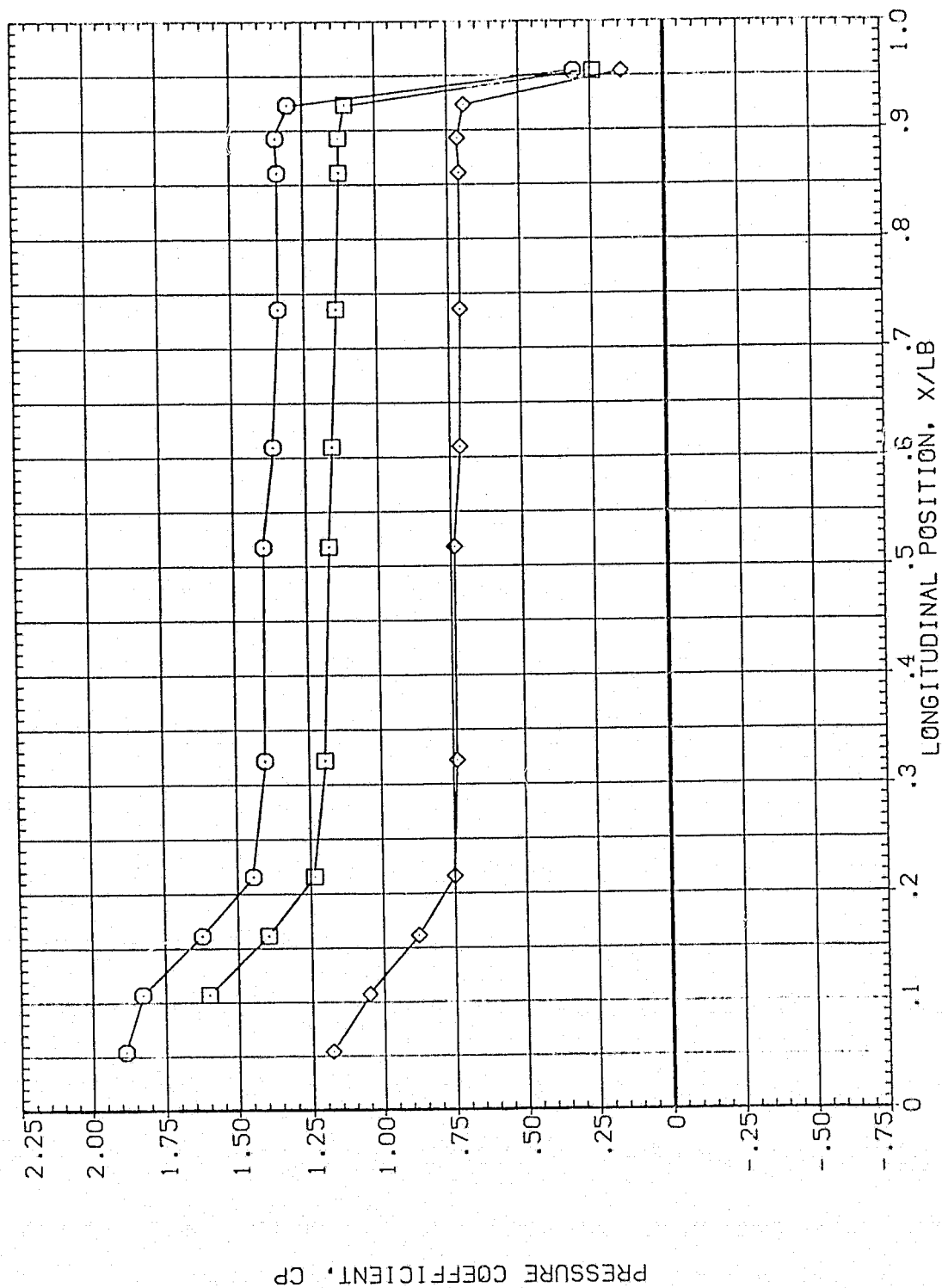


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	THETA	ALPHA	HACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	60.130	4.960	.000	.000	.000
□	270.000			2.000		
◇	292.500					

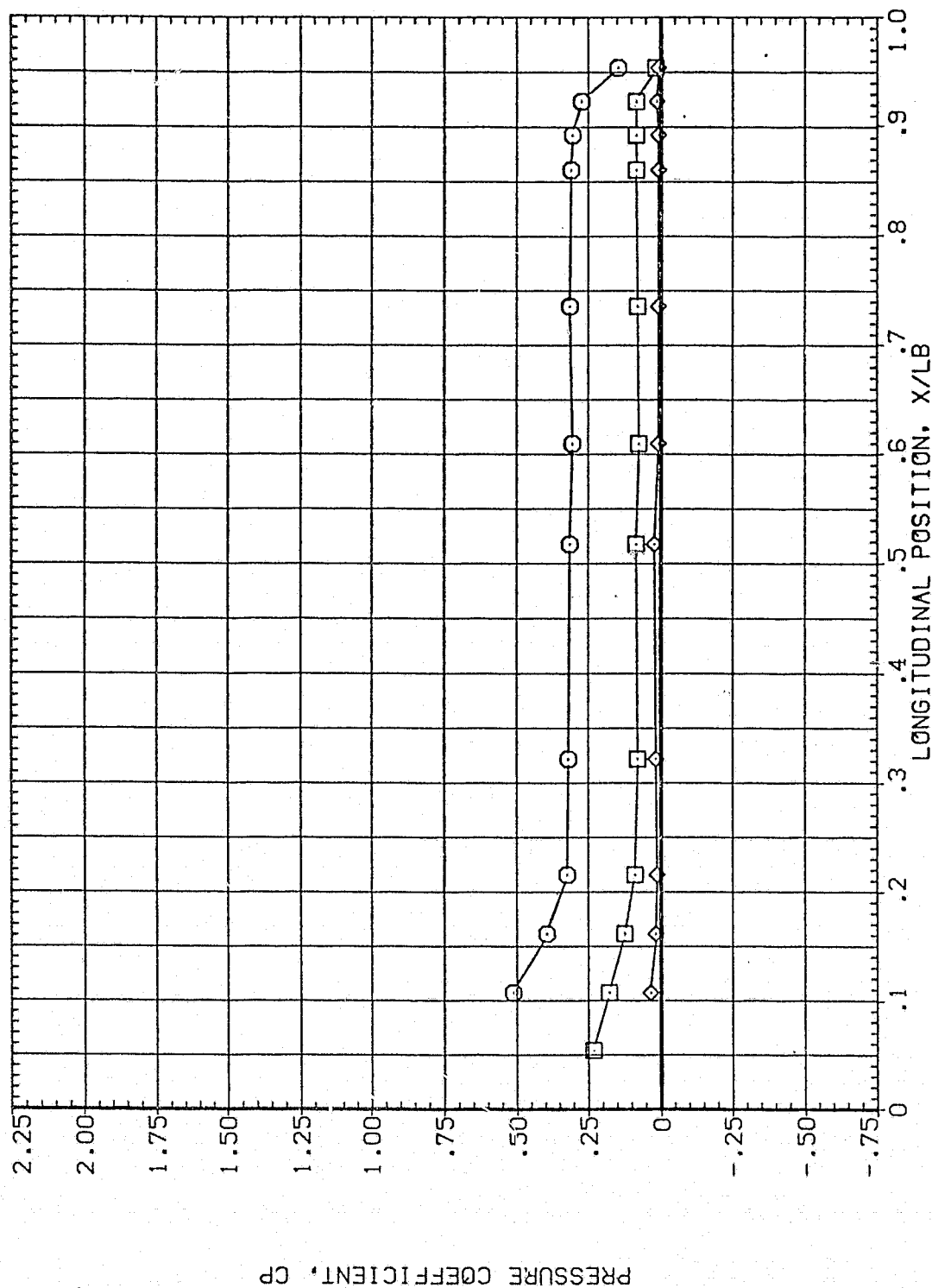


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	315.000	60.130	4.960	MCOUNT	.000	60.000
□	326.000				2.000	
◇	346.000					.000

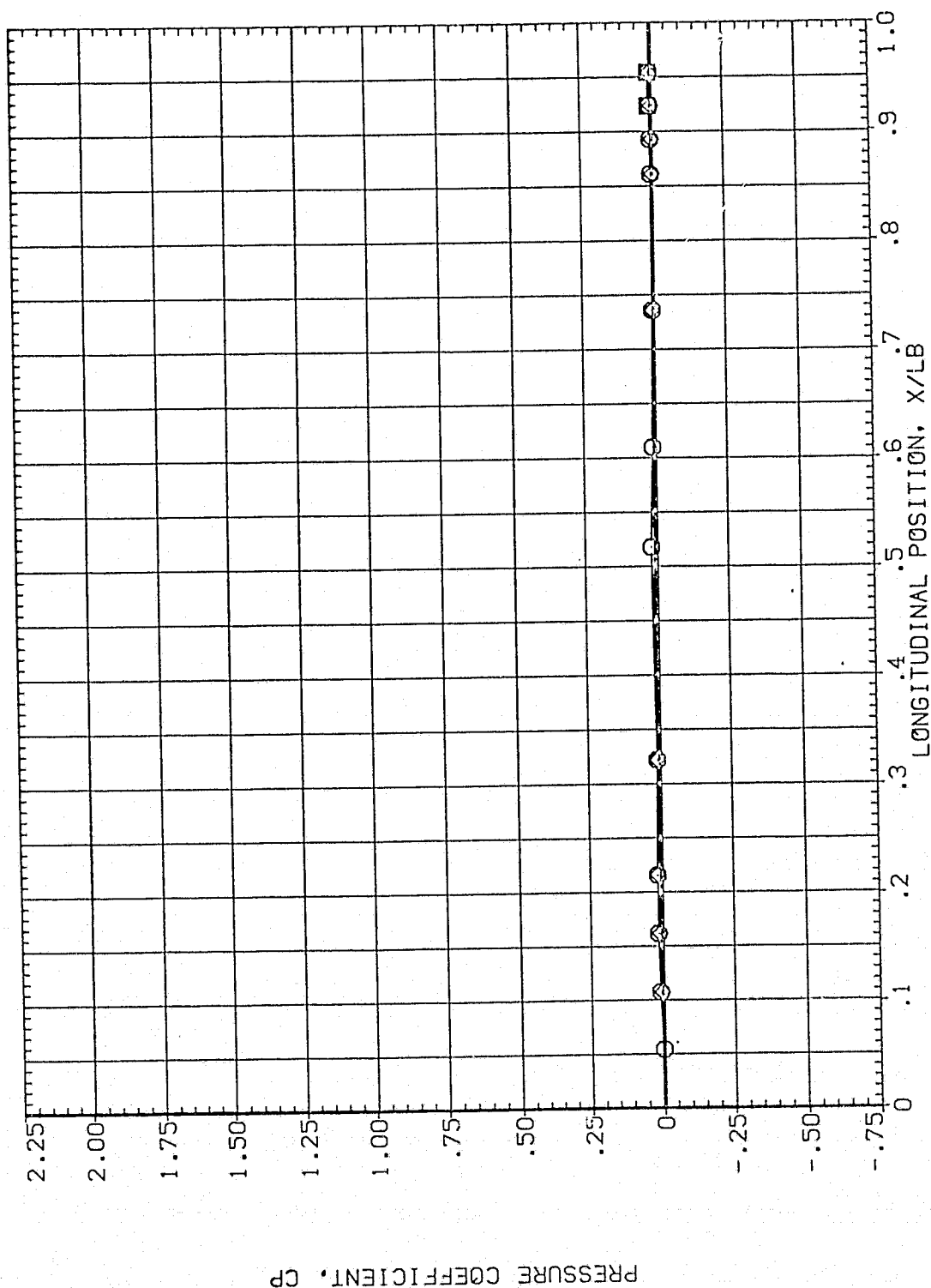


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 PHI 60.000
 OFFSET .000

ALPHA 63.130
 MACH 4.960

THETA .000
 14.000
 24.000

SYMBOL
 ○
 □
 ◇

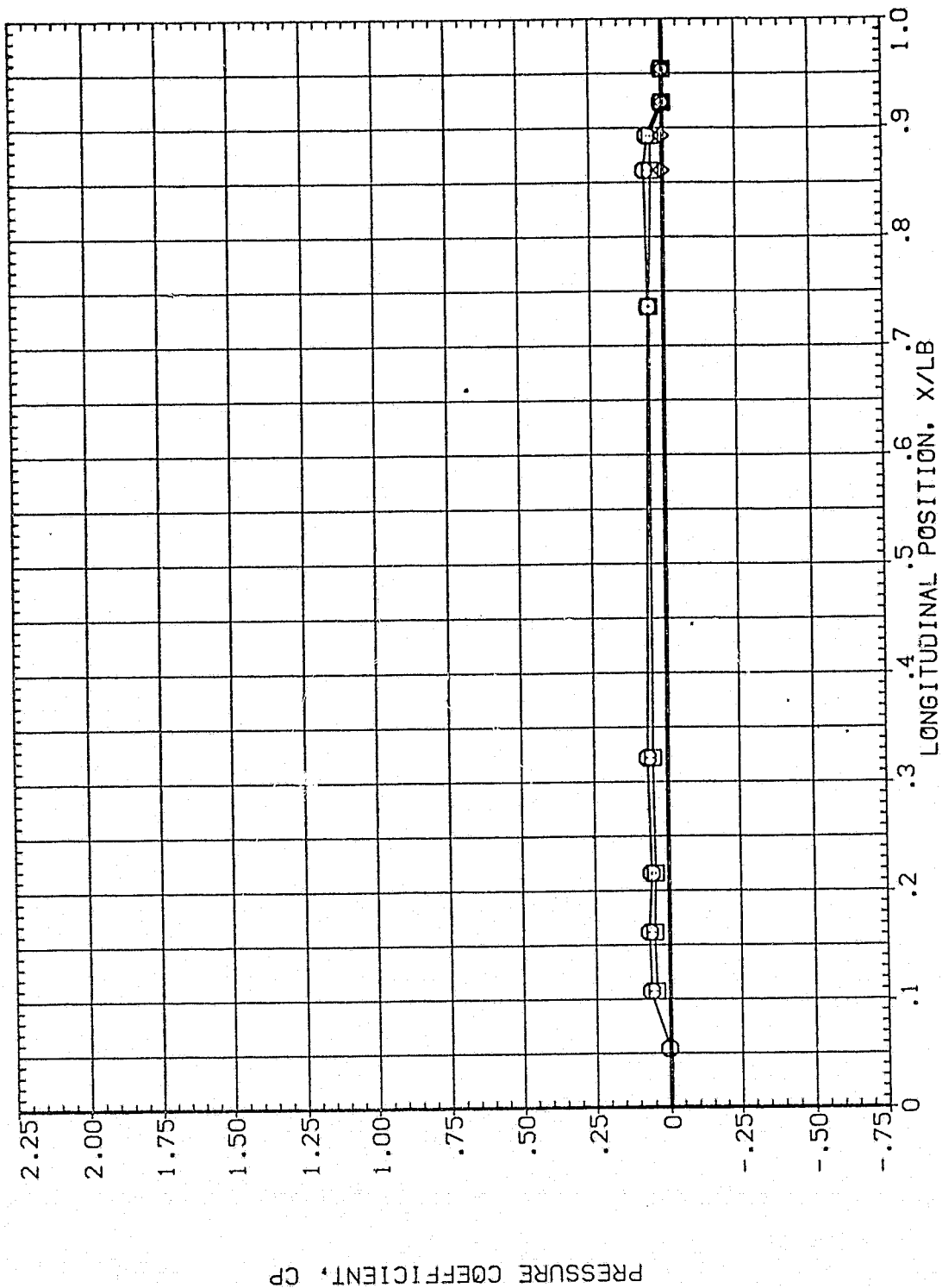


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(PIA065)

SYMBOL

THETA
45.000
67.500
90.000

ALPHA
63.130

MACH
4.960

PARAMETRIC VALUES
BETA
MOUNT

.000
2.000
60.000
OFFSET
PHI
.000

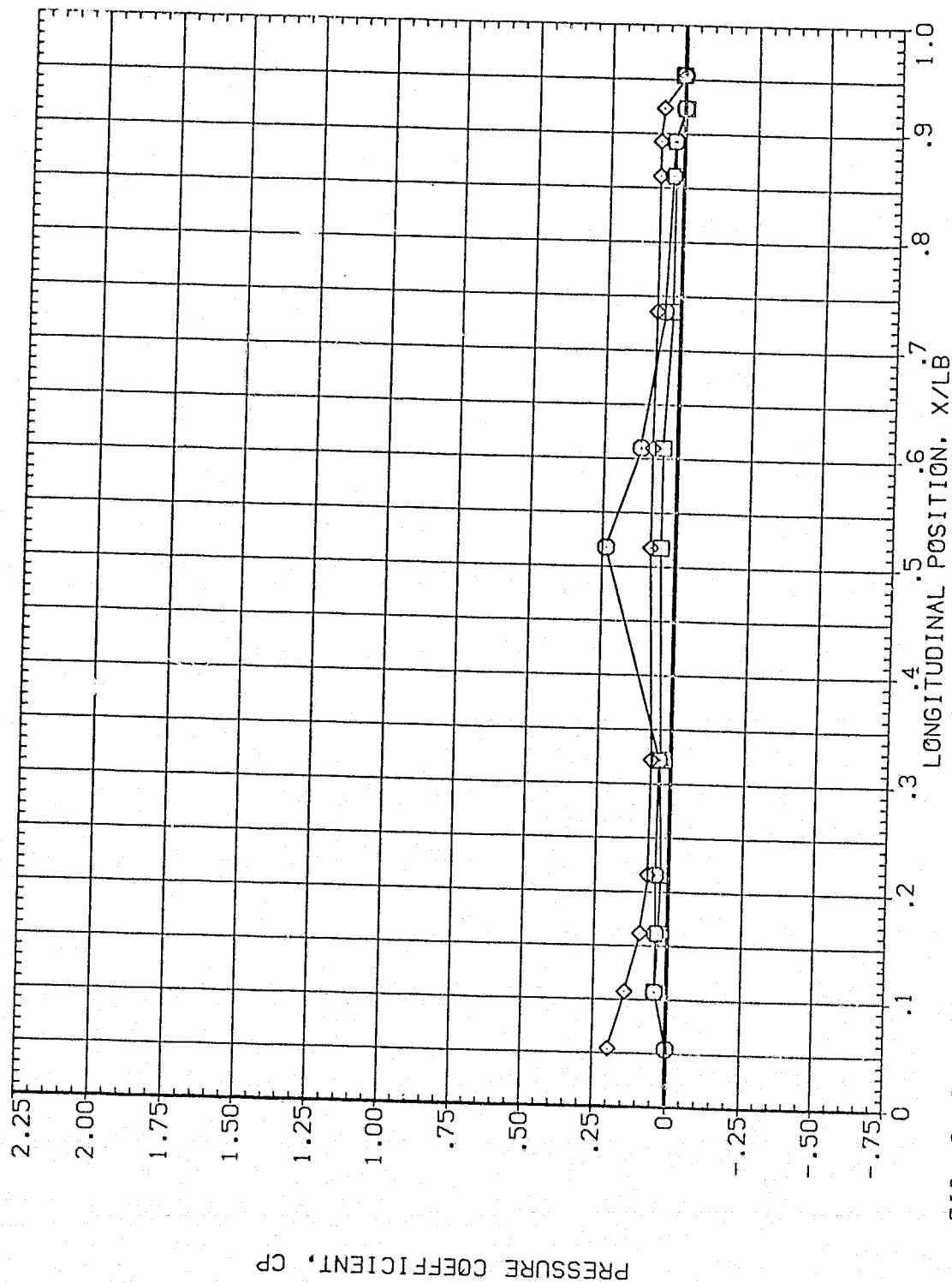


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES		
	112.500	135.000	63.130	63.130	4.960	4.960	BETA	OFFSET	PHI
○	157.500						2.000	.000	60.000
□							2.000	.000	60.000
◇							2.000	.000	60.000

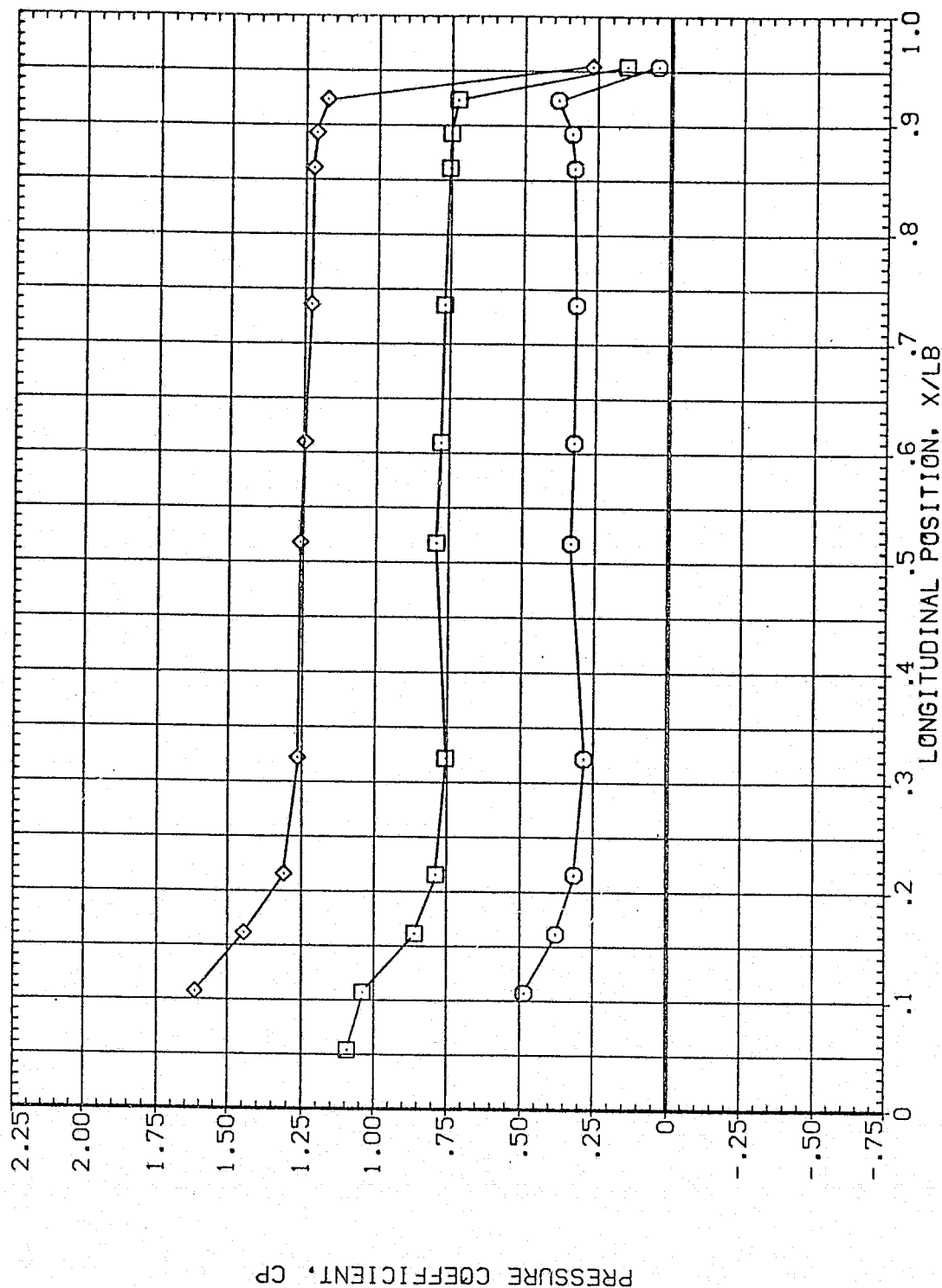


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	63.130	4.960	MOUNT	.000
□	202.500			OFFSET	2.000
◇	225.000			PHI	.000

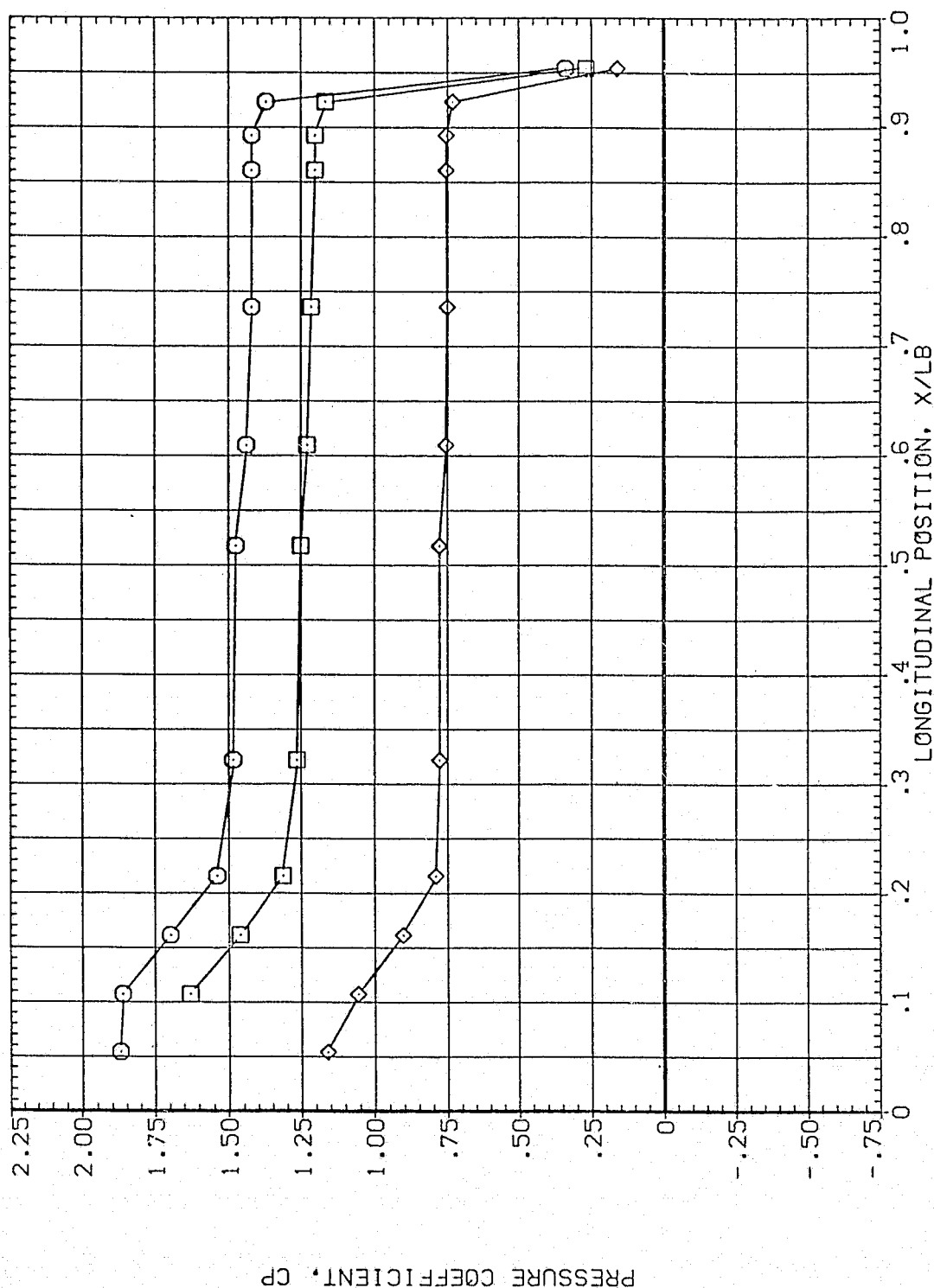


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

PARAMETRIC VALUES
 BETA .000
 HOUNT 2.000
 OFFSET PHI .000

SYMBOL THETA ALPHA MACH
 ○ 247.500 63.130 4.960
 □ 270.000
 ◇ 292.500

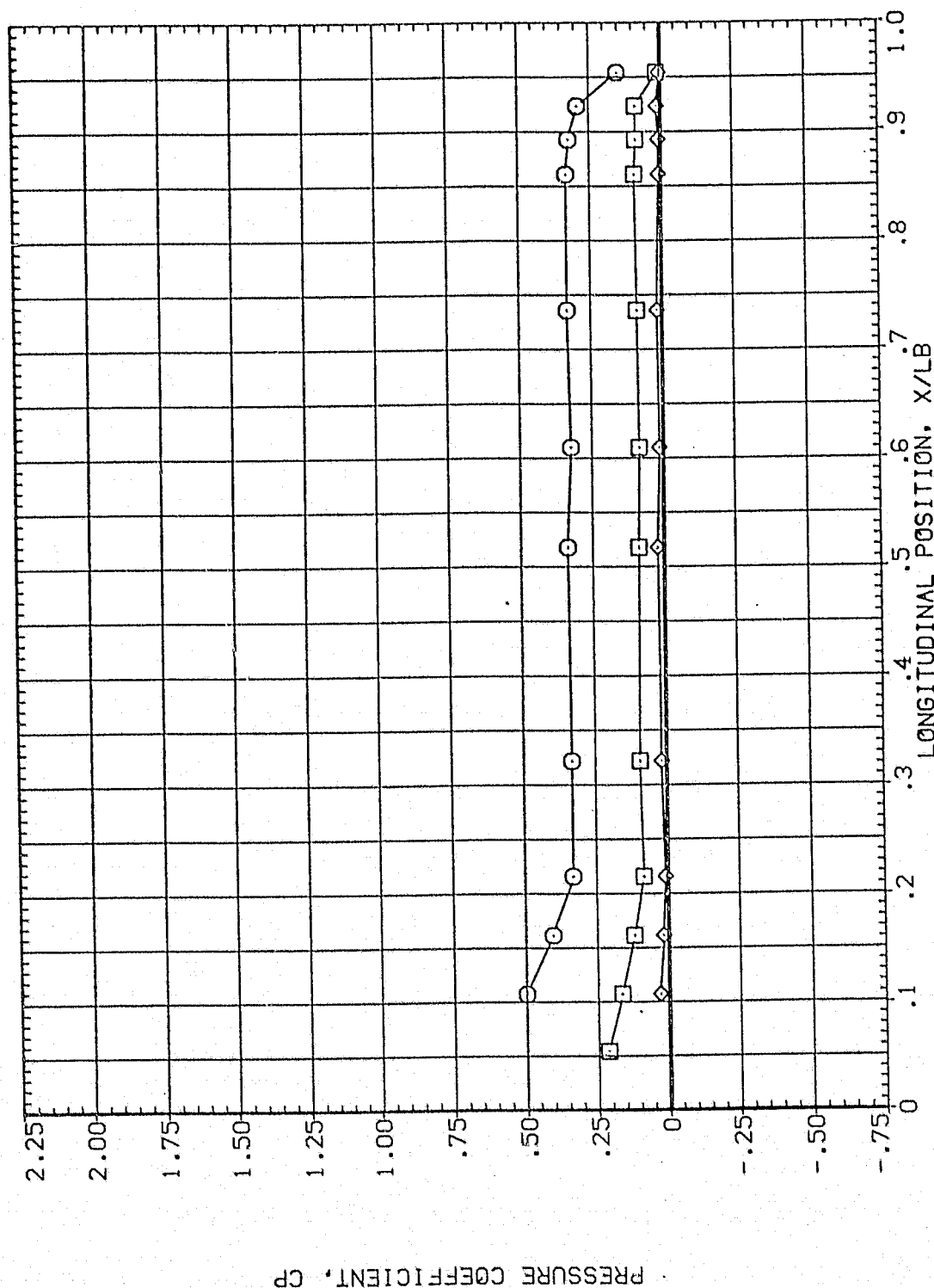


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	315.000	63.130	4.950	MCUNT	.000
□	326.000			PHI	2.000
◇	346.000			OFFSET	50.000
					.000

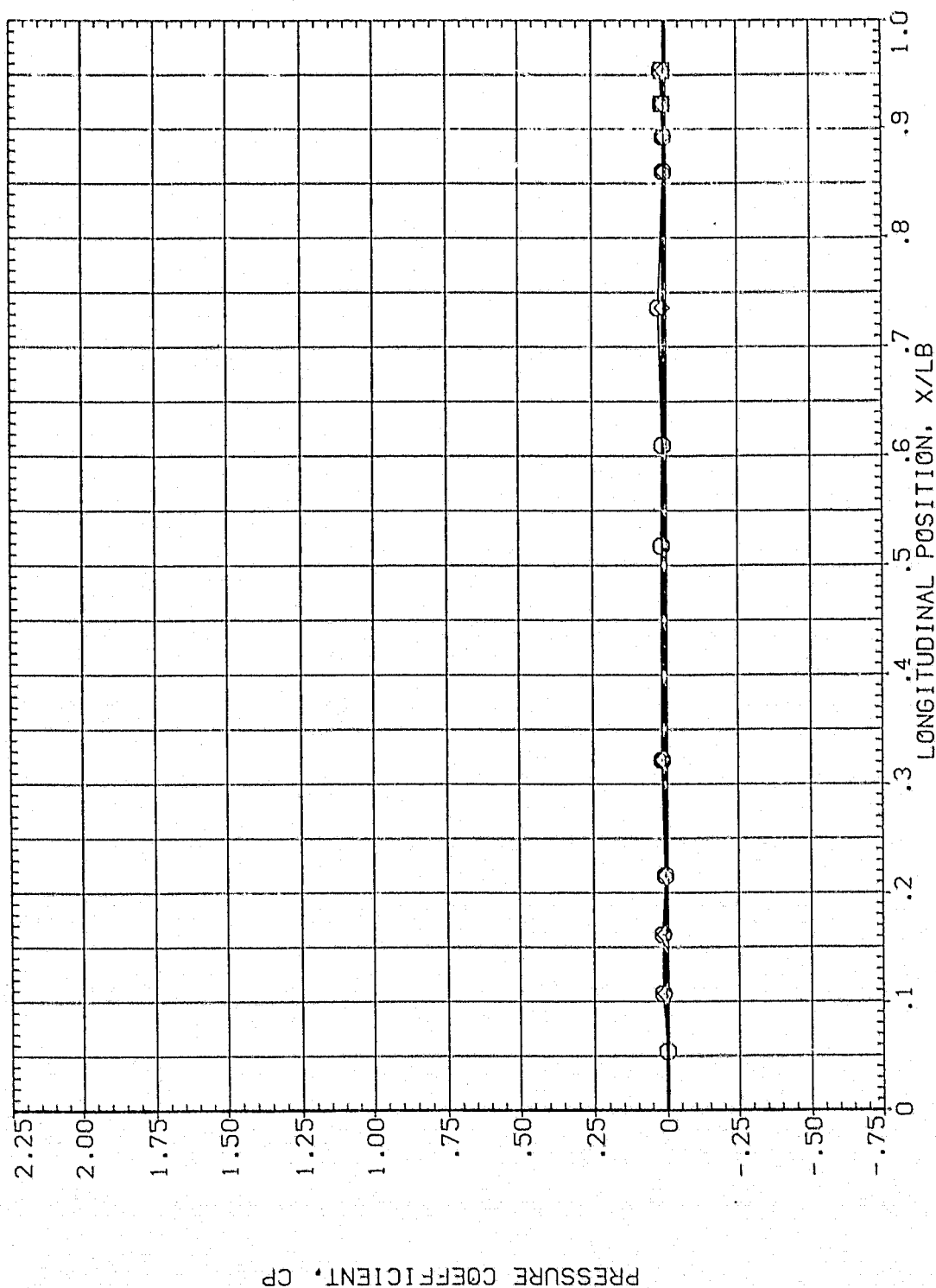


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

PARAMETRIC VALUES
 BETA .000
 HOUNT 2.000
 OFFSET PHI 60.000
 .000

SYMBOL
 THETA .000
 ALPHA 66.130
 MACH 4.960
 14.000
 24.000

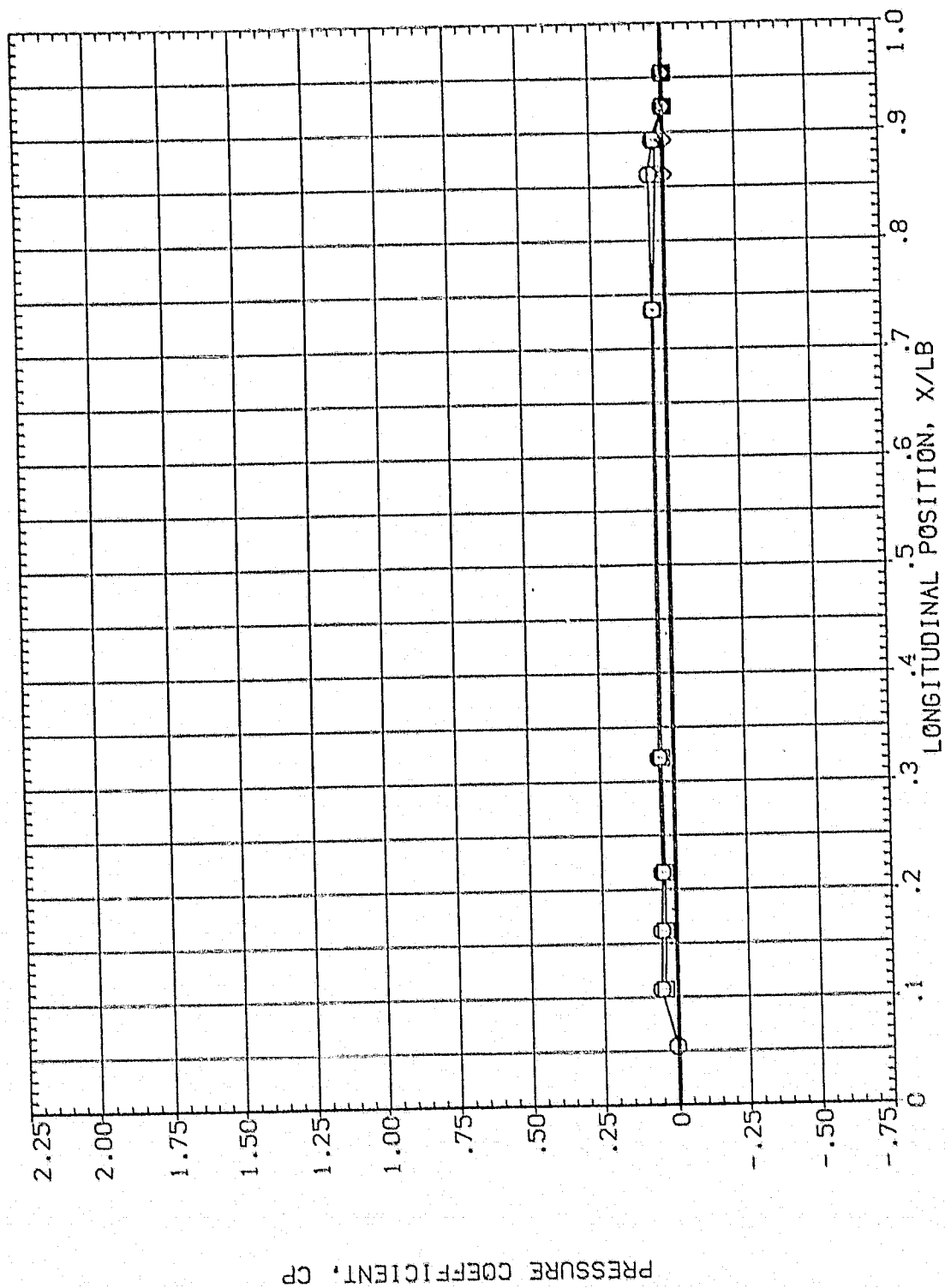


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	66.130	4.960	MOUNT	.000
□	67.500			PHI	2.000
◇	90.000				.000

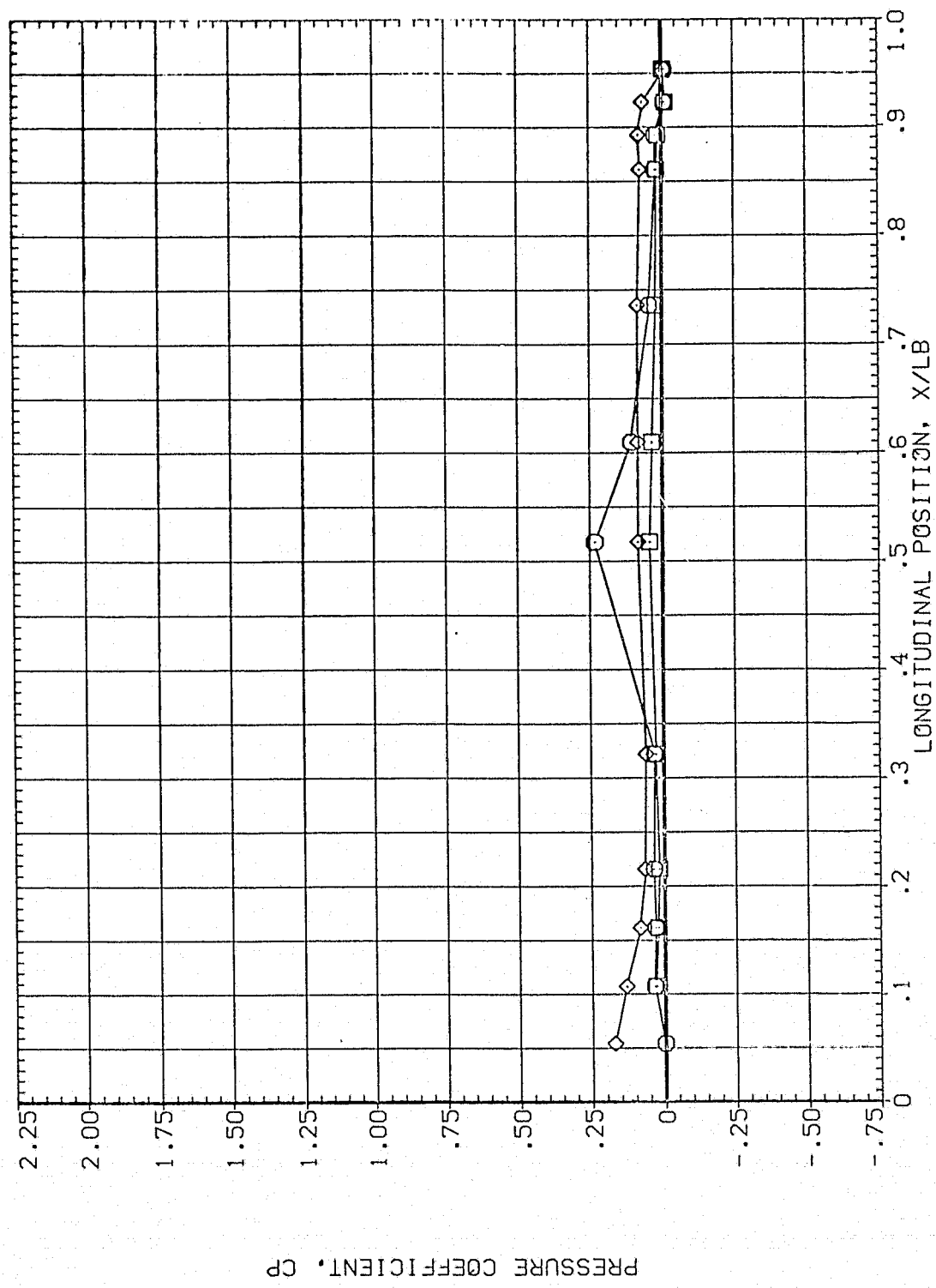


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	112.500	66.130	4.960	MOUNT	.000 OFFSET PHI
□	135.000				2.000
◇	157.500				60.000

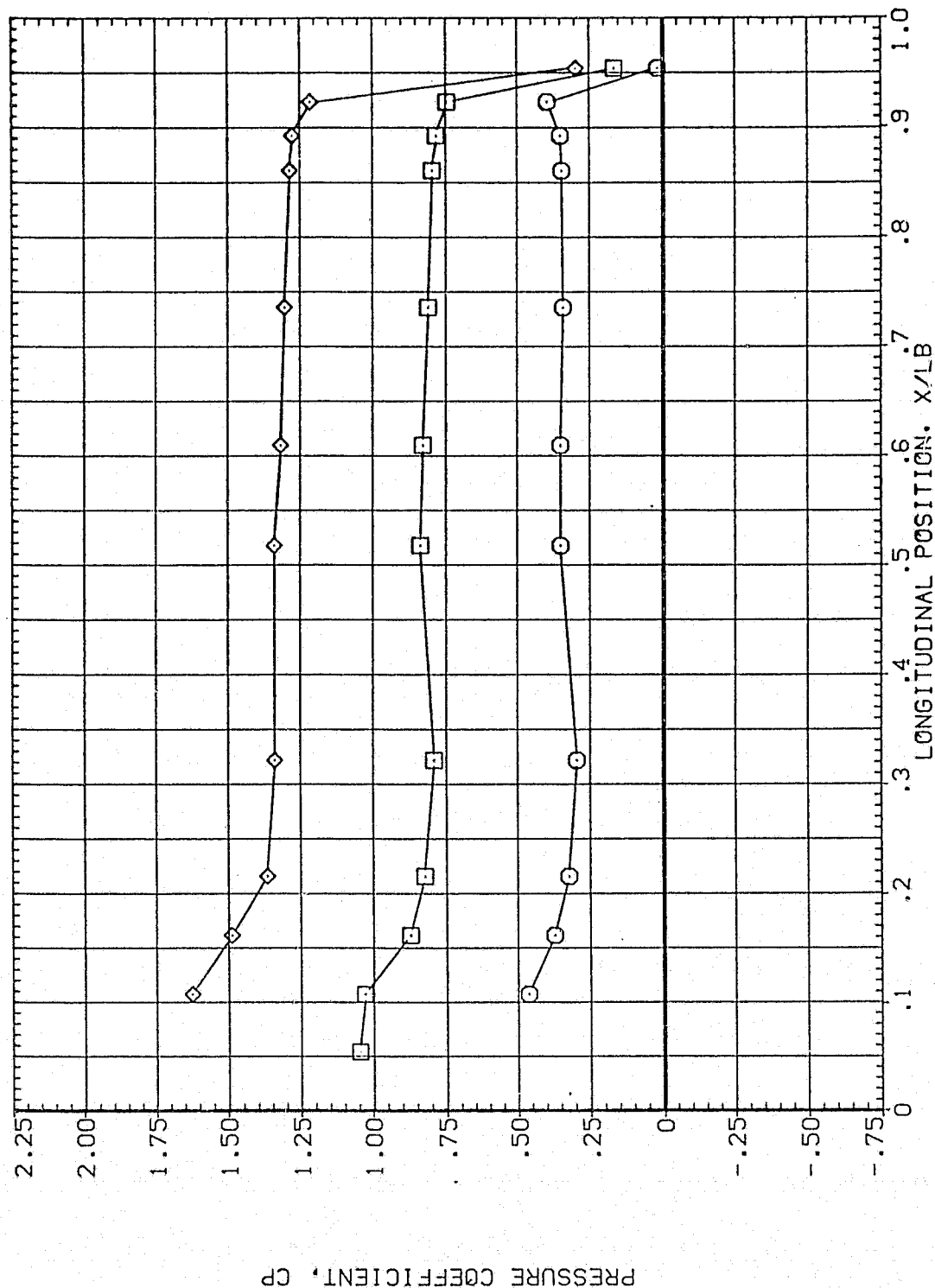


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	65.130	4.950	MCOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				60.000 .000

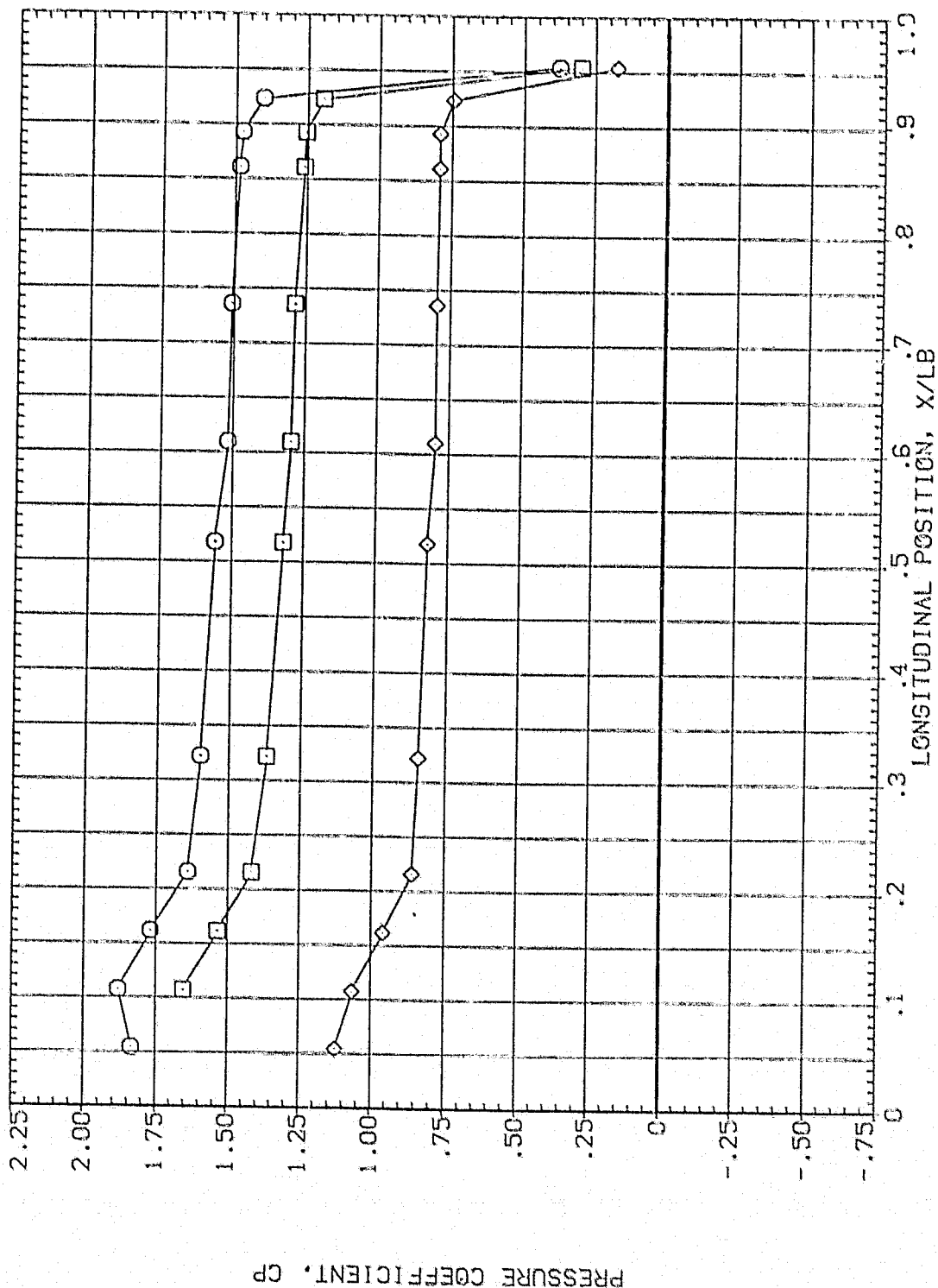


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	THETA		ALPHA	MACH	PARAMETRIC VALUES		
	247.500	270.000	66.130	4.960	BETA	.000	60.000
○	292.500				MOUNT <th>2.000</th> <th>.000</th>	2.000	.000
□							
◇							

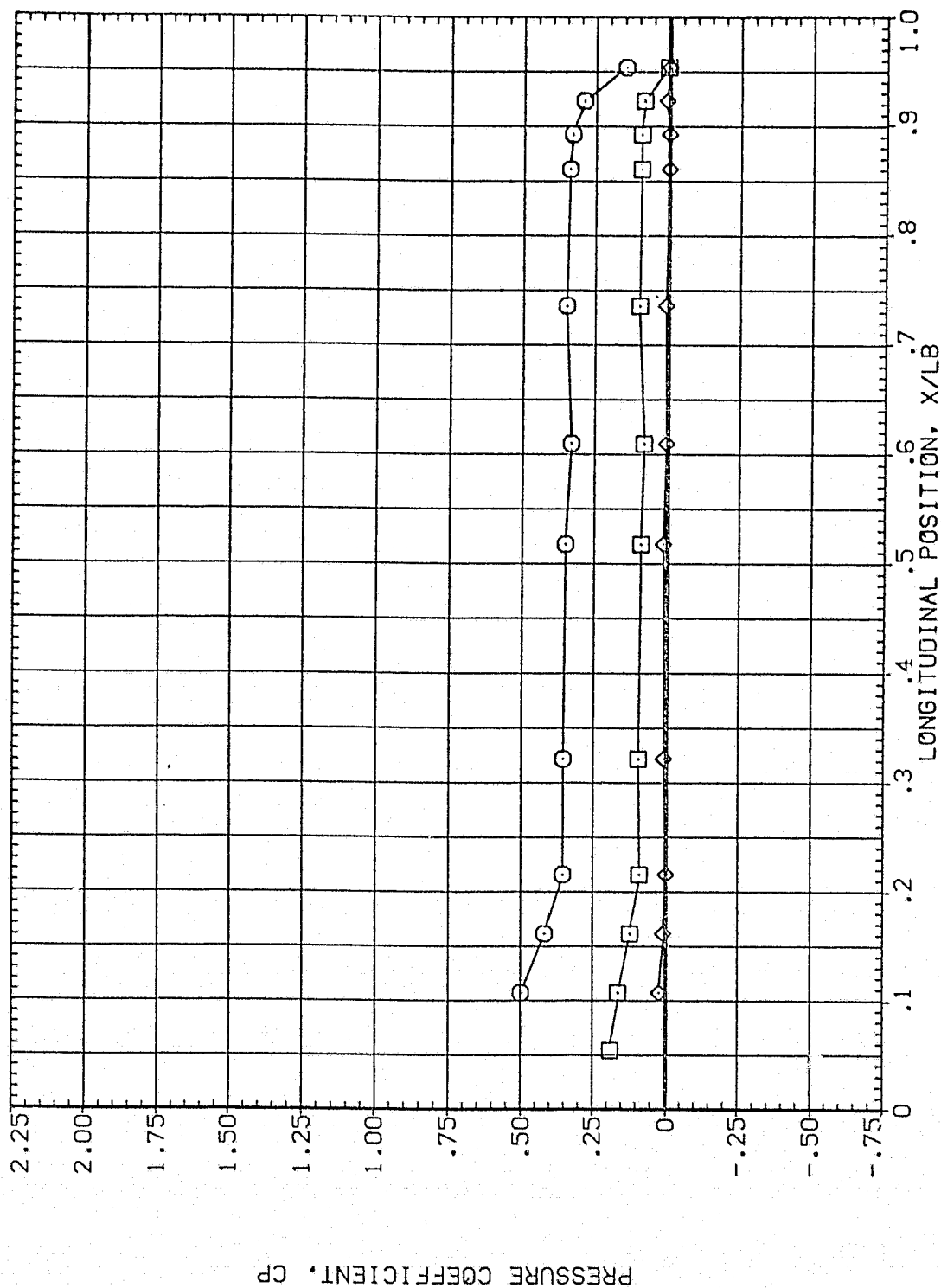


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	315.000	66.130	4.960	MOUNT	.000	60.000
□	326.000				2.000	
◇	346.000					.000

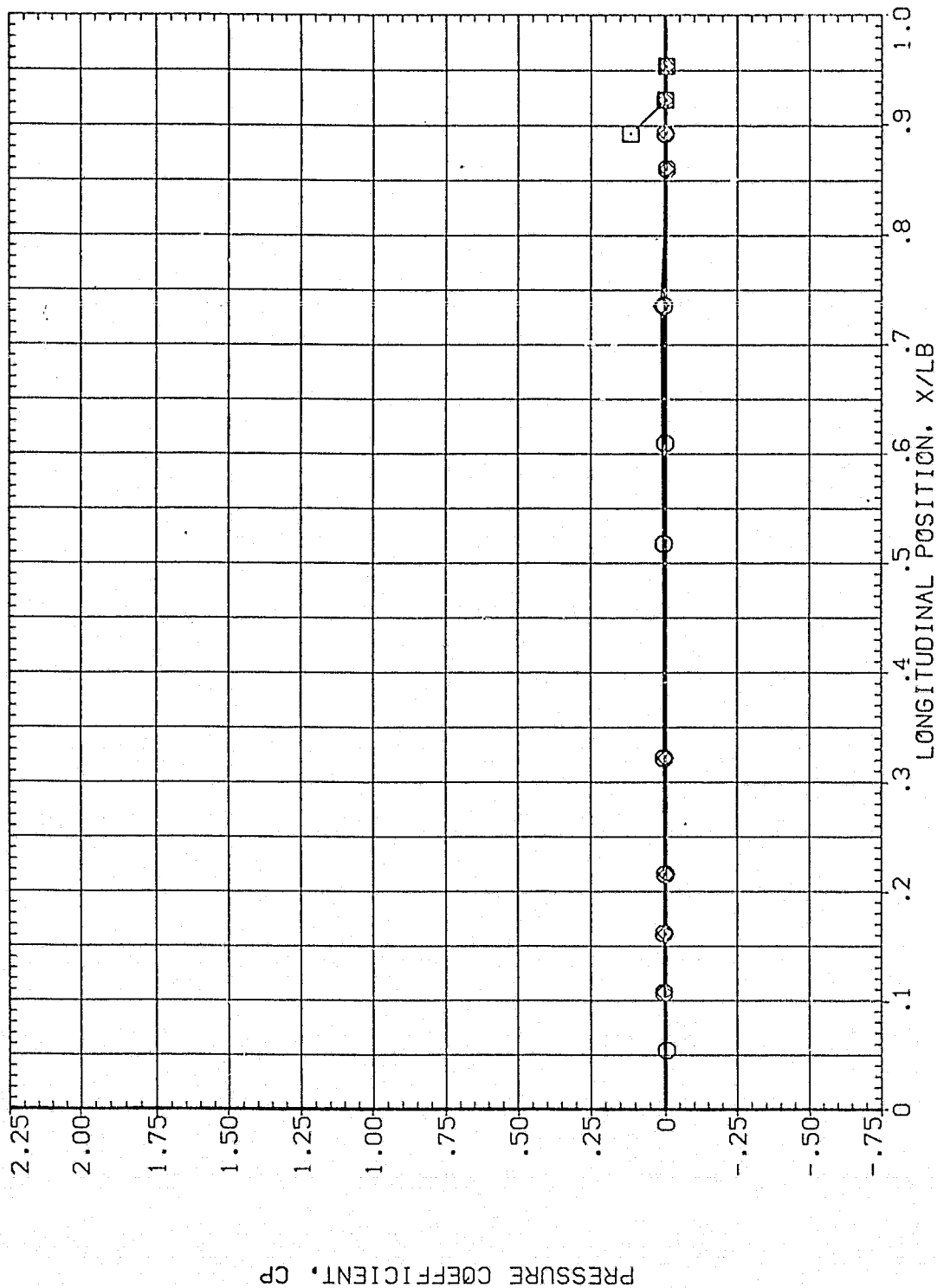


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL	THETA		ALPHA		MACH		BETA		PARAMETRIC VALUES	
	.000	14.000	69.130	24.000	4.960		MOUNT	.000	OFFSET	PHI
○								2.000		60.000
□								.000		.000
◇										

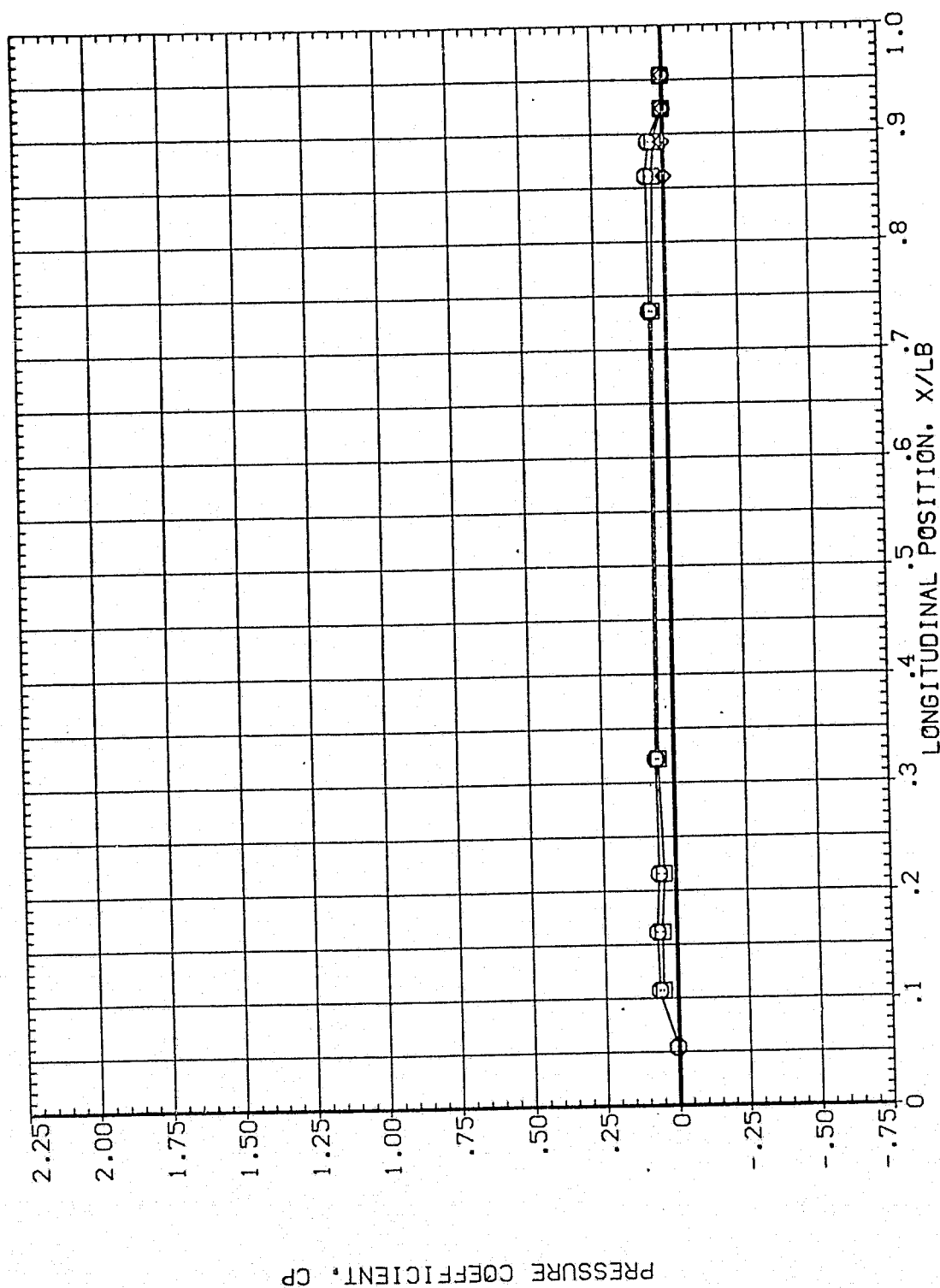


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA067)

SYMBOL

THETA ALPHA MACH
 45.000 69.130 4.960
 67.500
 90.000

BETA MOUNT
 .000
 2.000
 .000
 .000
 .000
 .000

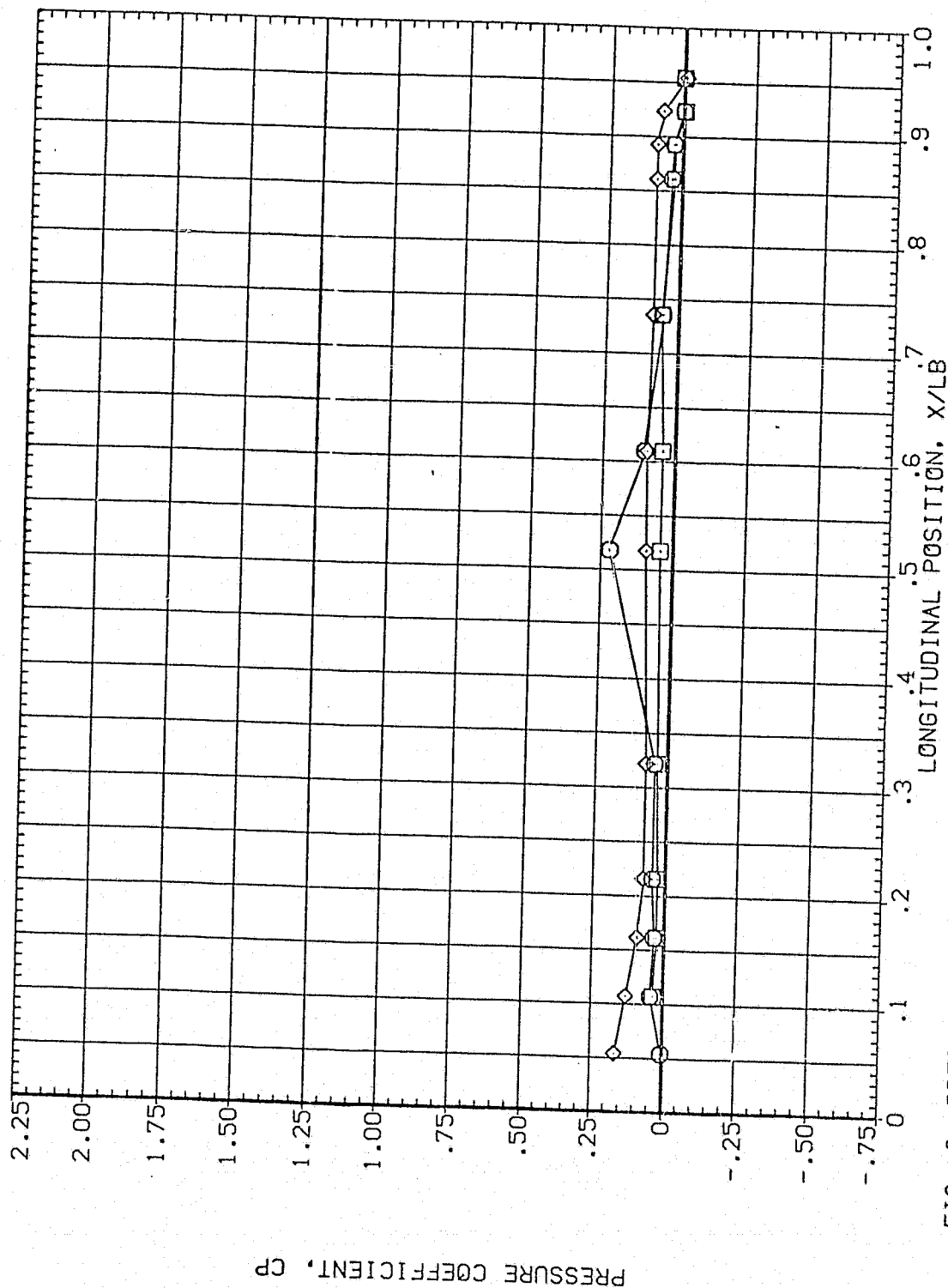


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	112.500	69.130	4.960	MOUNT	.000 OFFSET
□	135.000				2.000 PHI
◇	157.500				60.000

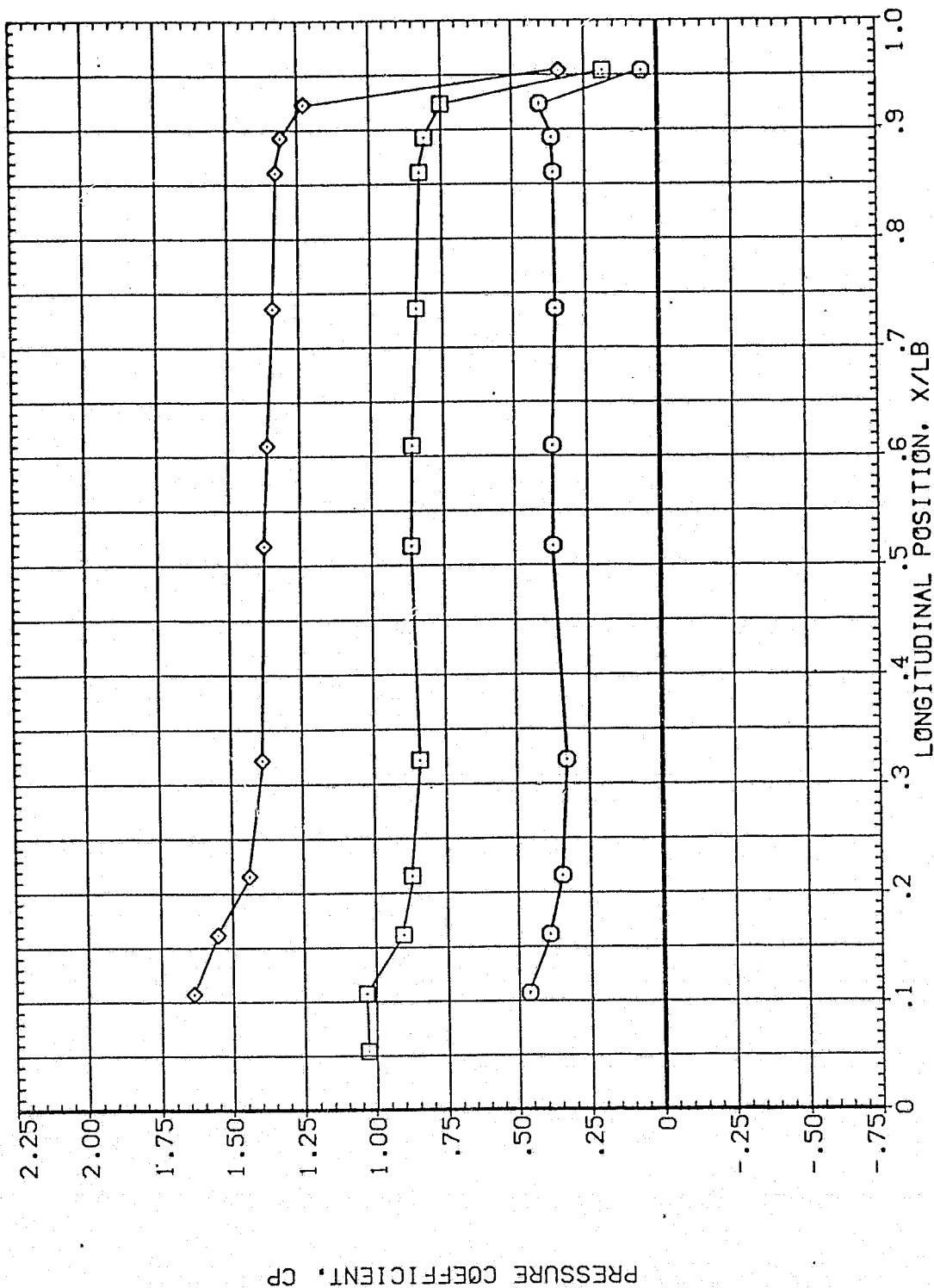
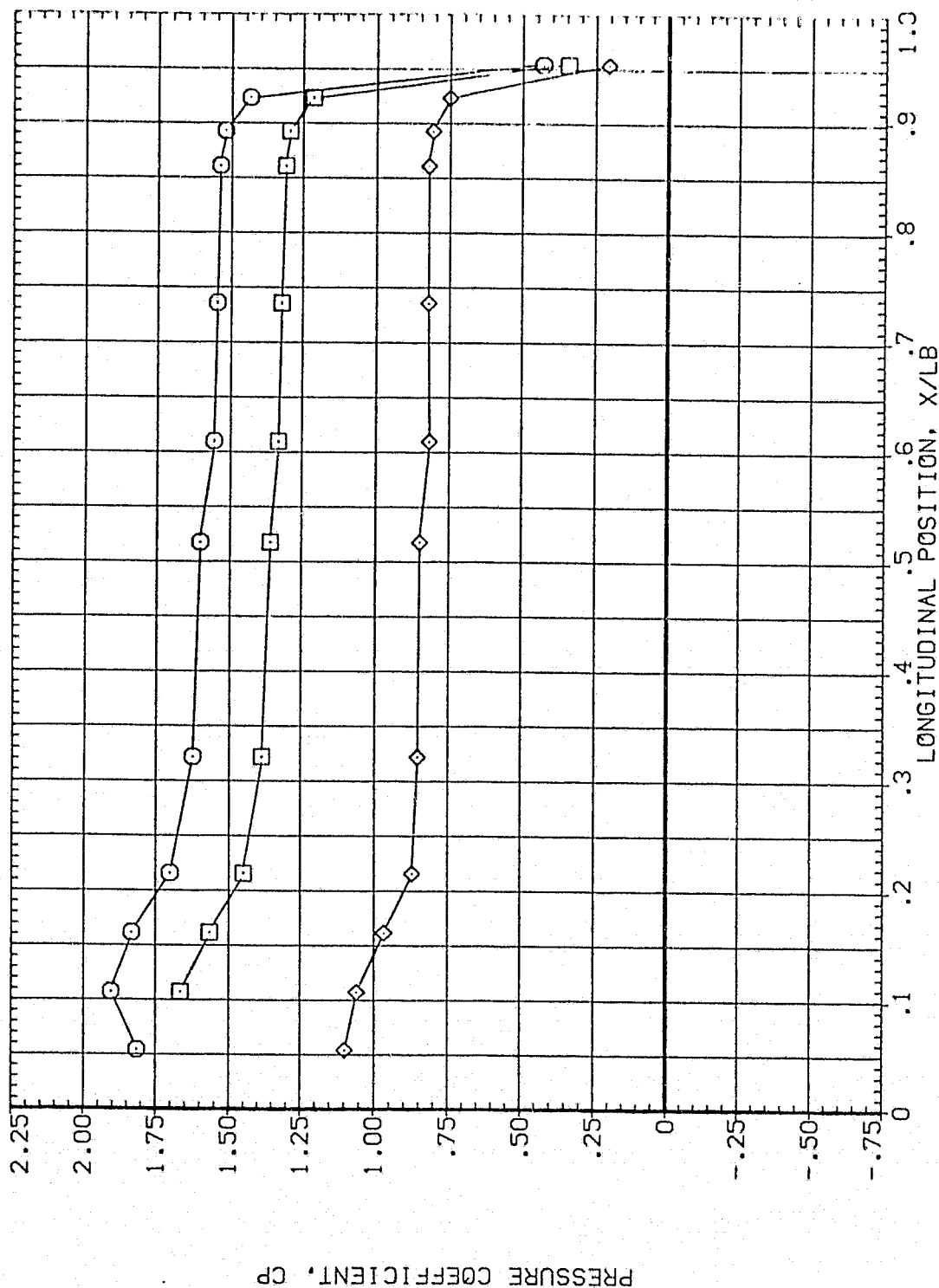


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL THETA ALPHA MACH
 ○ 180.000 69.130 4.960
 □ 202.500
 ◇ 225.000

PARAMETRIC VALUES
 BETA .000 OFFSET 60.000
 MOUNT 2.000 PHI .000



MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	69.130	4.960	MOUNT	.000	.000
□	270.000				2.000	
◇	292.500					.000

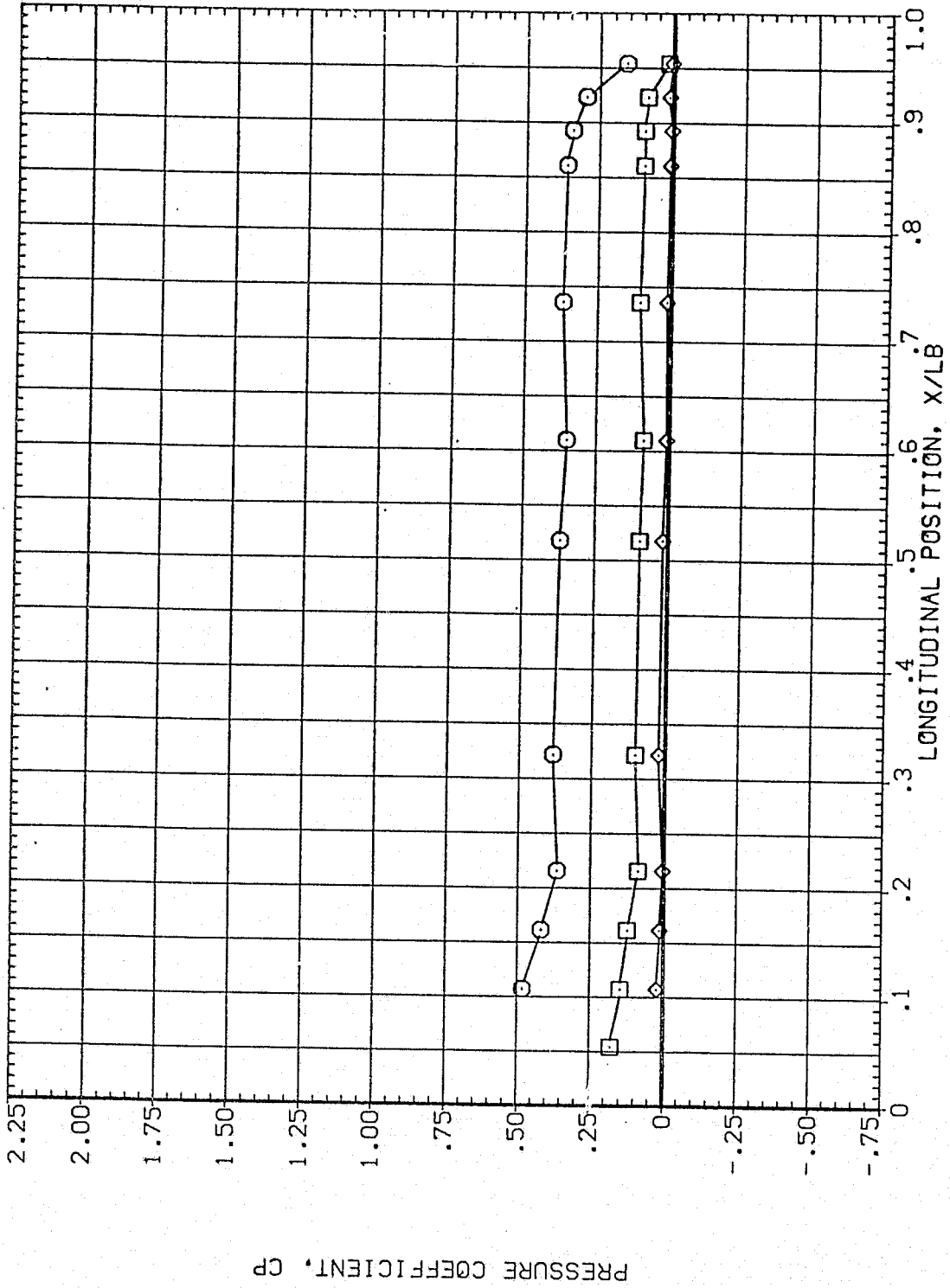


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	315.000	59.130	4.960	MOUNT	.000
◇	326.000				2.000
◇	345.000				PHI
					50.000
					.000

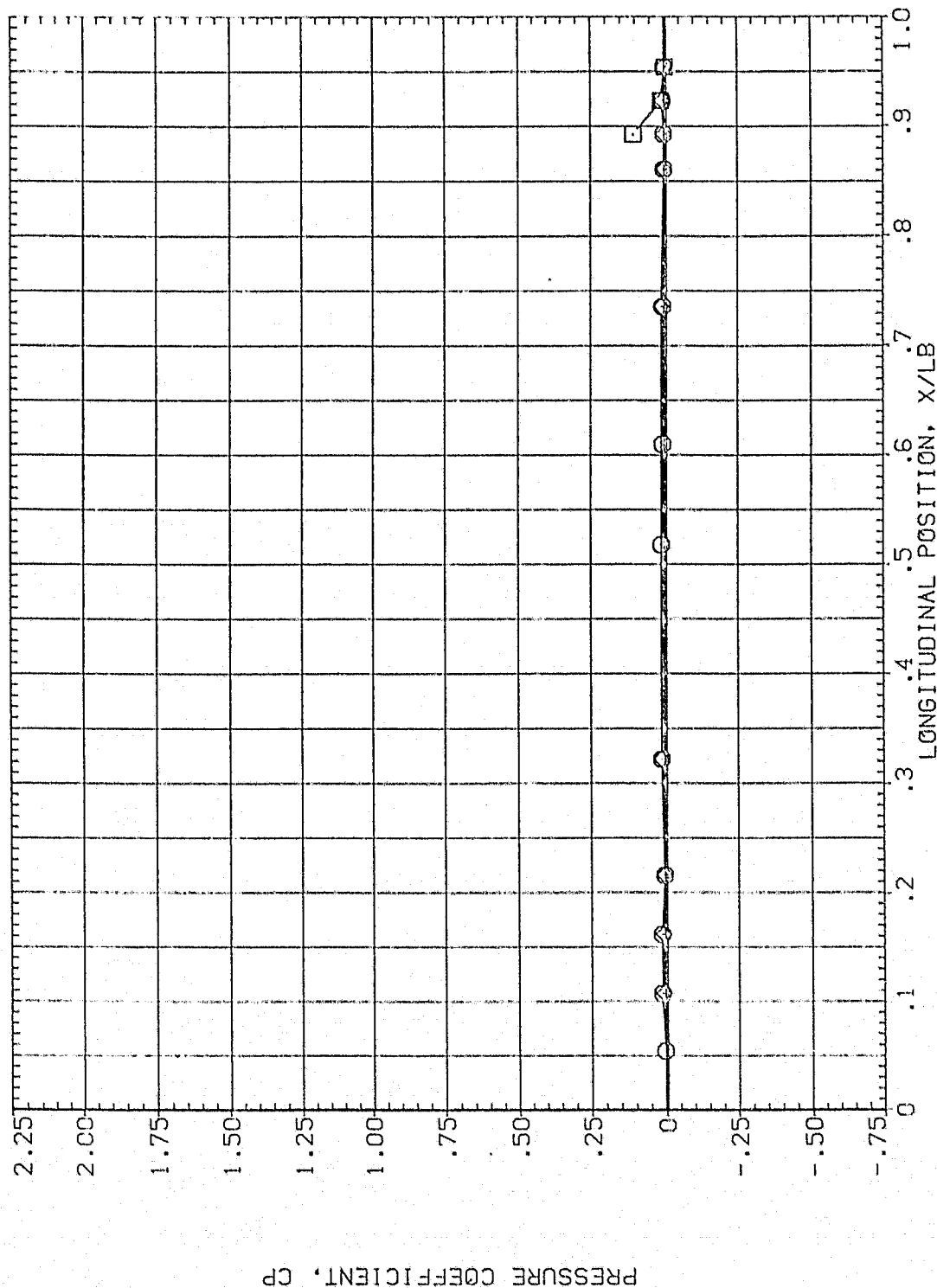


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

PARAMETRIC VALUES
 BETA .000
 HCOUNT 2.000
 OFFSET PHI .000
 80.000
 .000

SYMBOL
 THETA .000
 ALPHA 89.980
 MACH 4.960
 14.000
 24.000

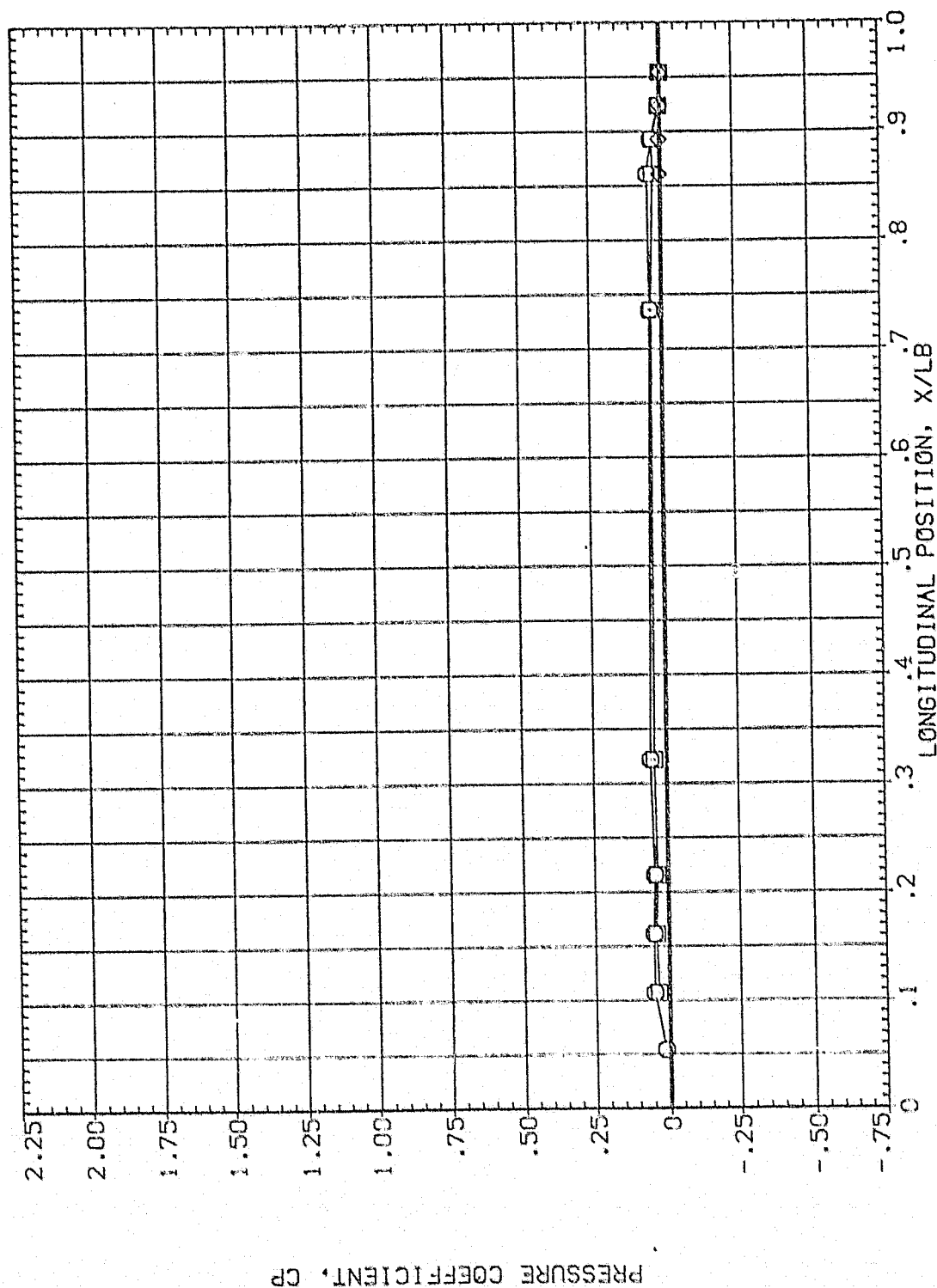


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
□
◇

THETA
45.000
67.500
90.000

ALPHA
69.980

MACH
4.960

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
80.000
OFFSET
P1A
.000

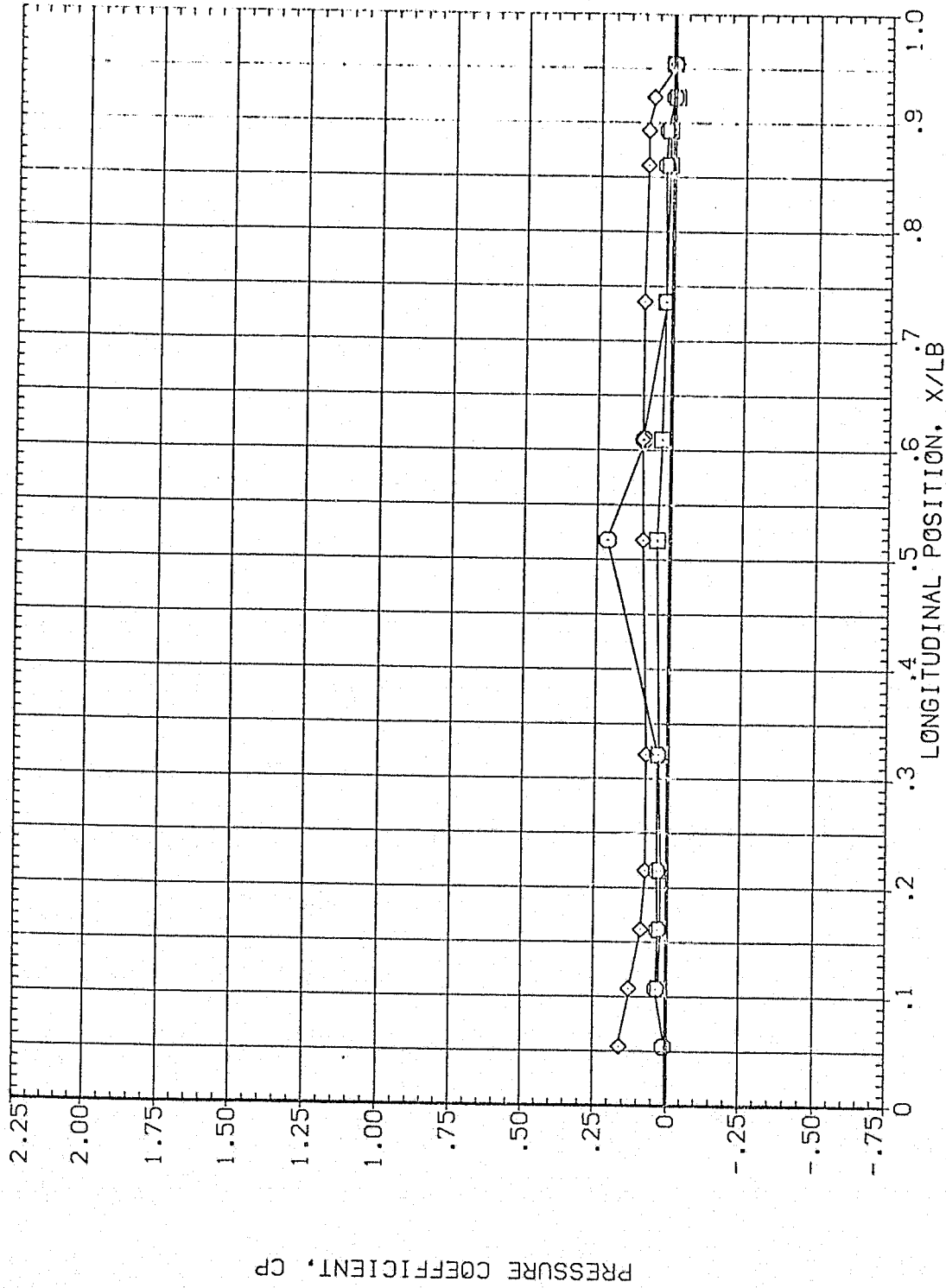


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2. (P1A068)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	69.980	4.960	.000	.000	.000
□	135.000			2.000		
◇	157.500					

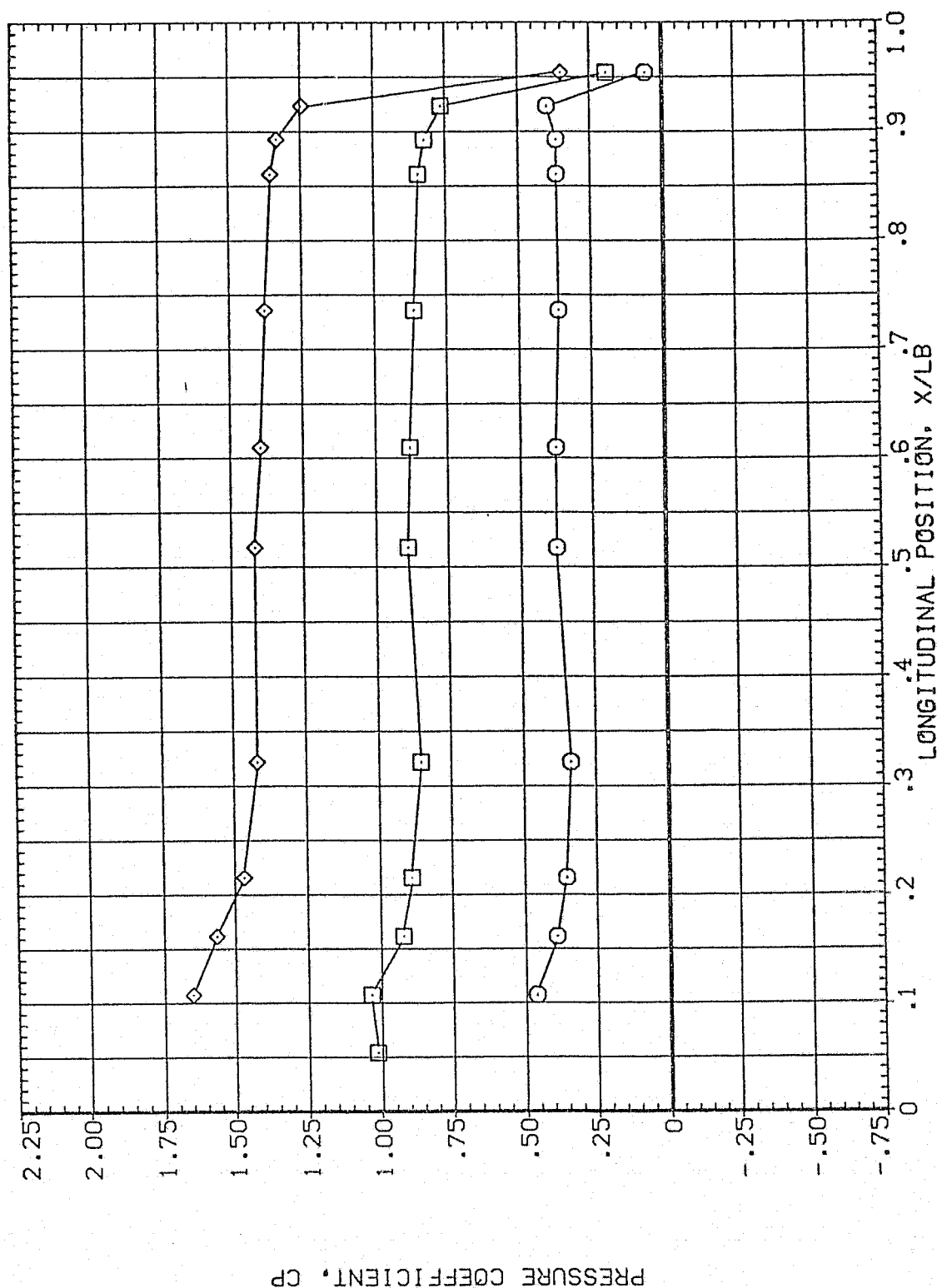


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	69.980	4.960	HUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				.000

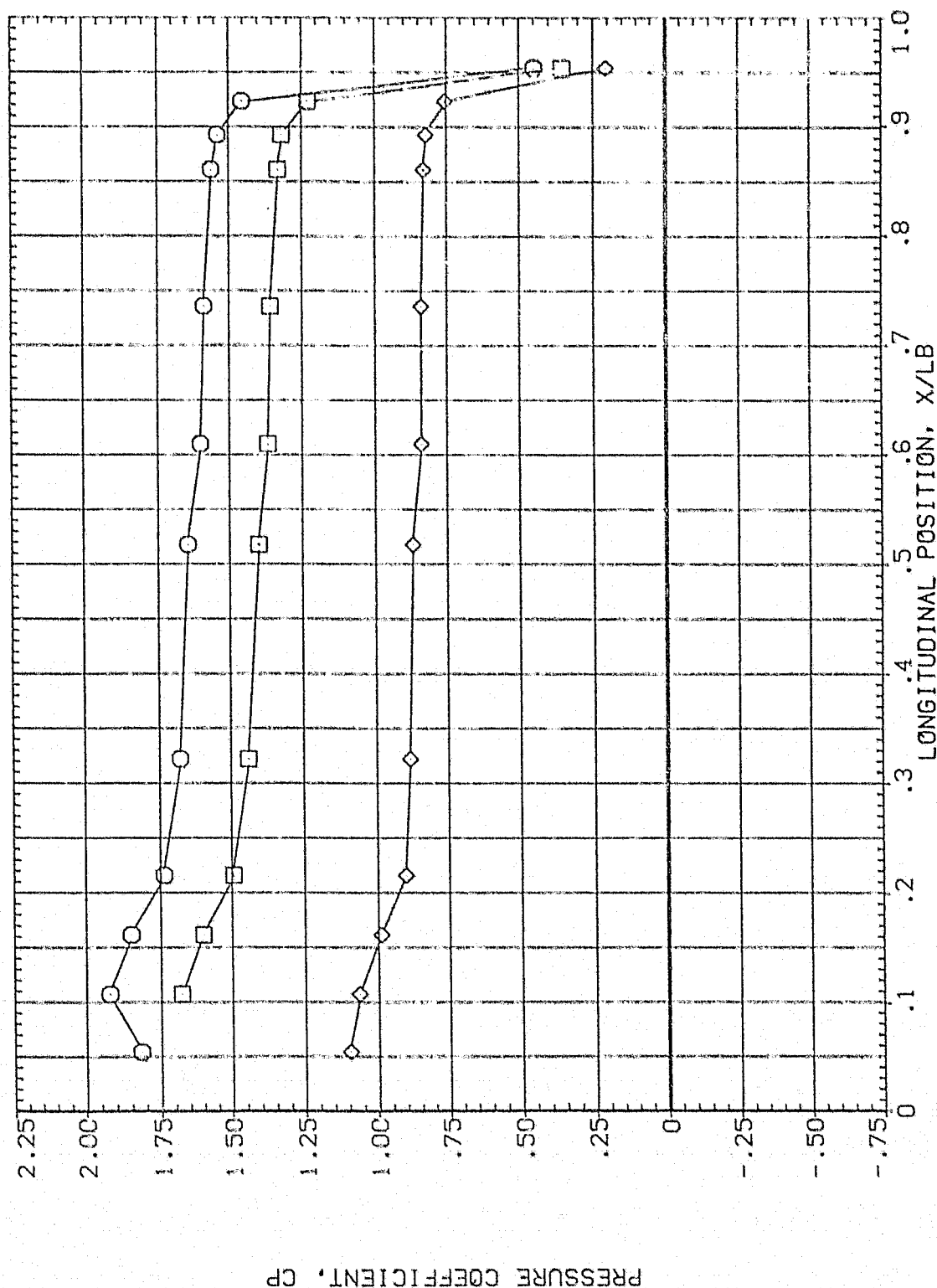


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	247.500	69.980	4.960	HOUNT	.000	80.000
□	270.000				2.000	.000
◇	292.500					

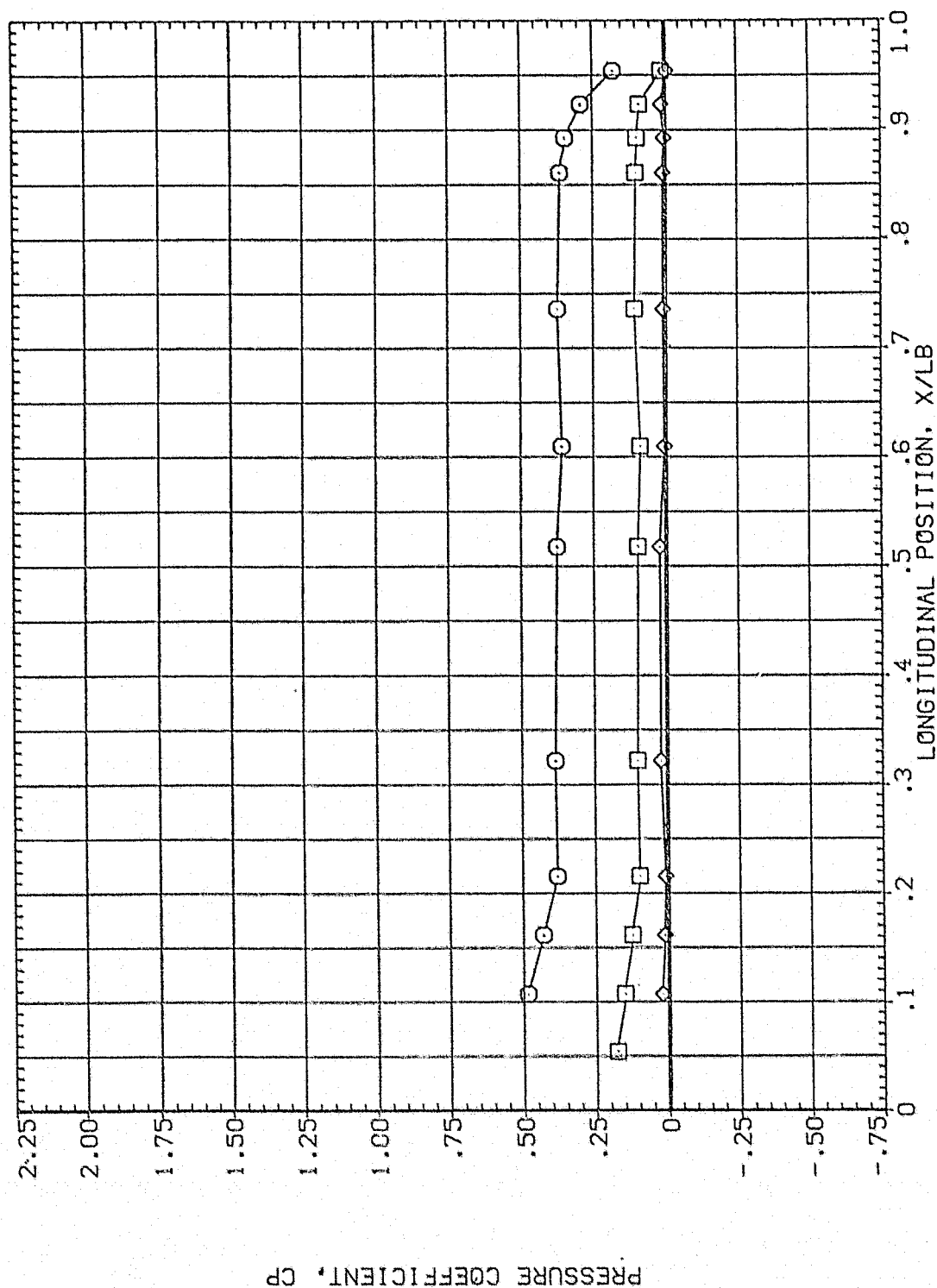


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	69.980	4.960	MOUNT	.000 OFFSET 80.000
□	326.000				2.000 PHI .000
◇	346.000				

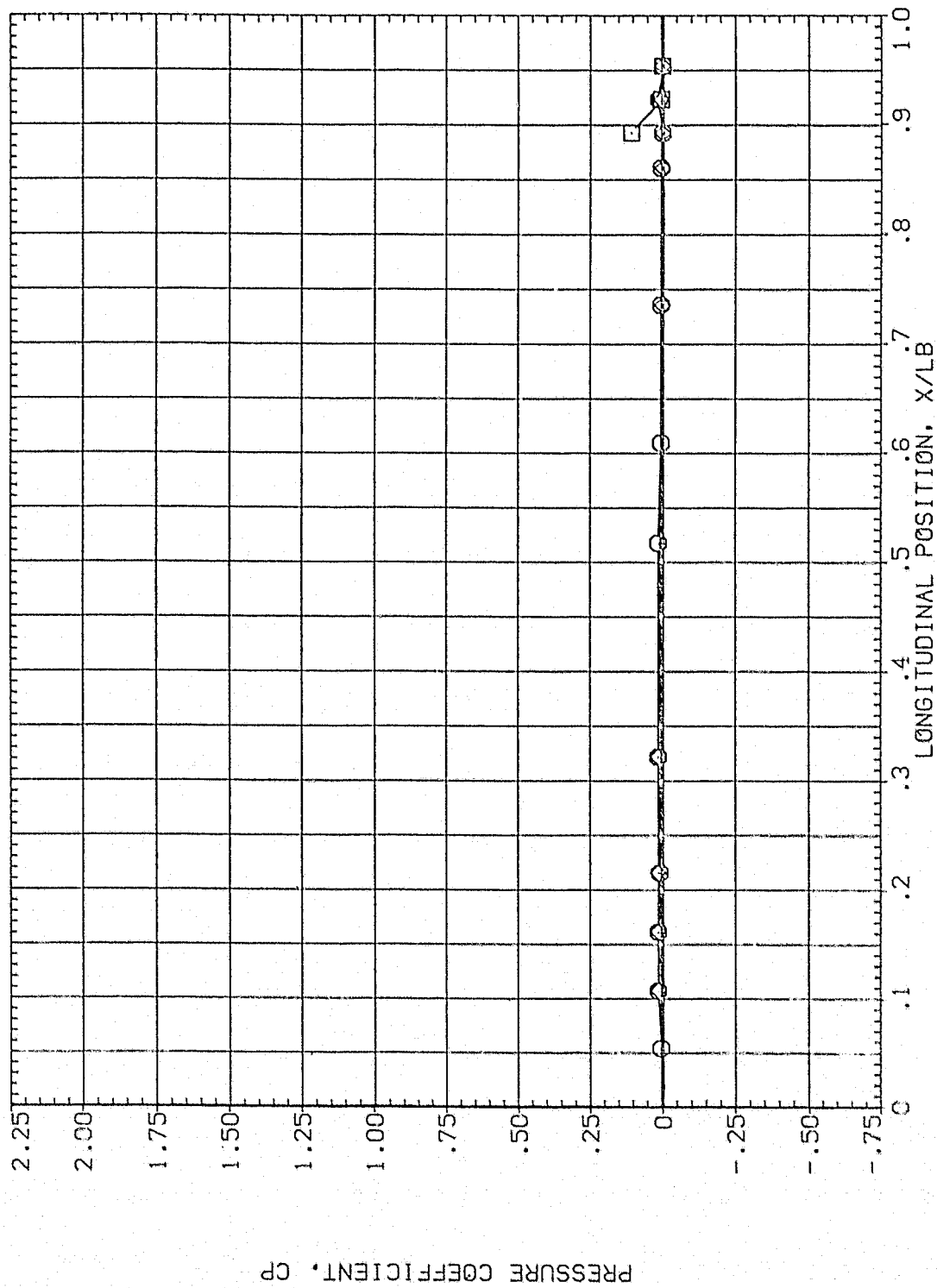


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A069)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.000	71.880	4.960	MGUNT	.000
□	14.000				2.000
◇	24.000				80.000
					PHI
					.000

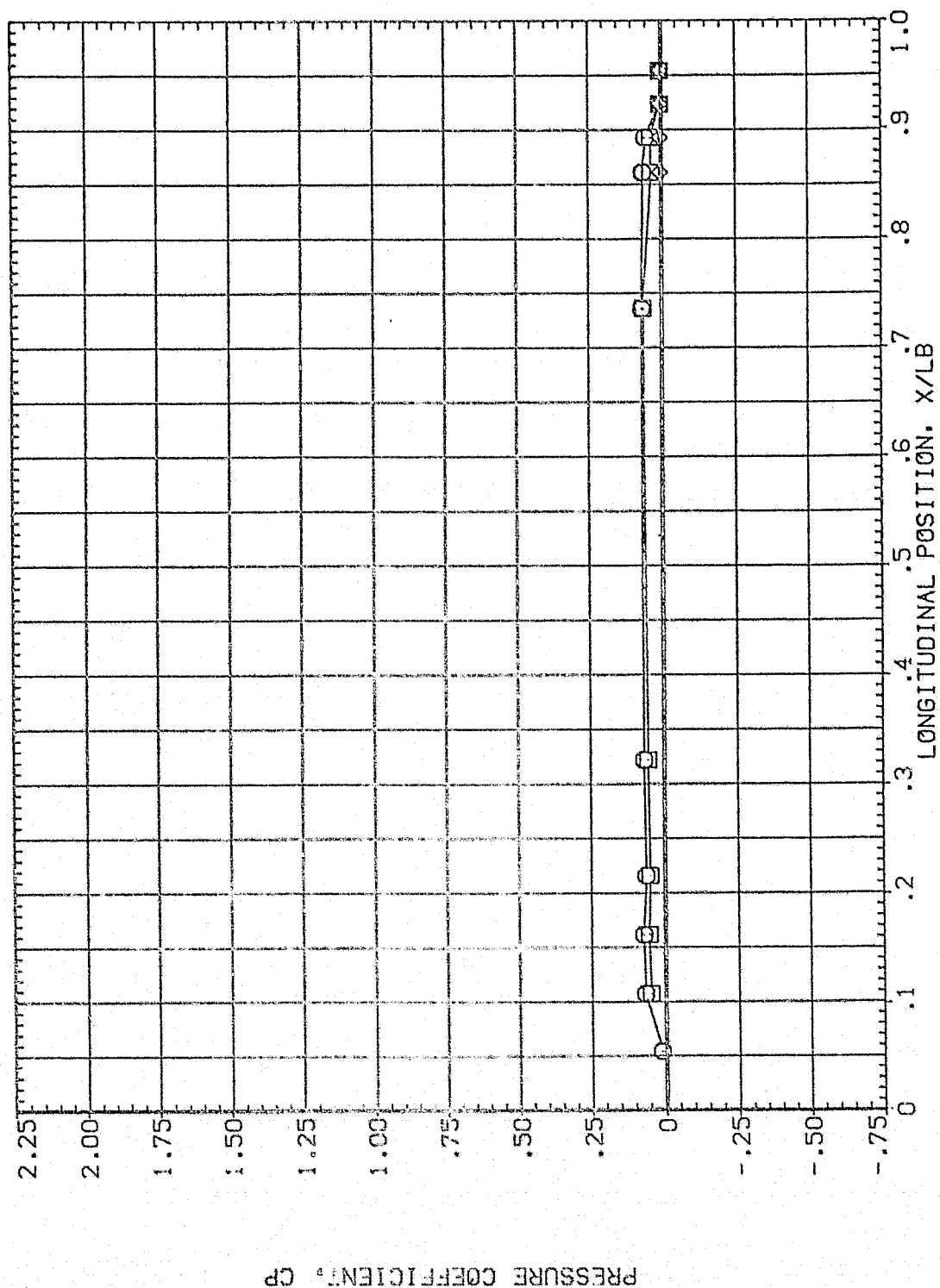


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

SYMBOL
 ○
 □
 ◇

THETA
 45.000
 67.500
 90.000

ALPHA
 71.880

MACH
 4.960

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 .000
 .000
 PHI

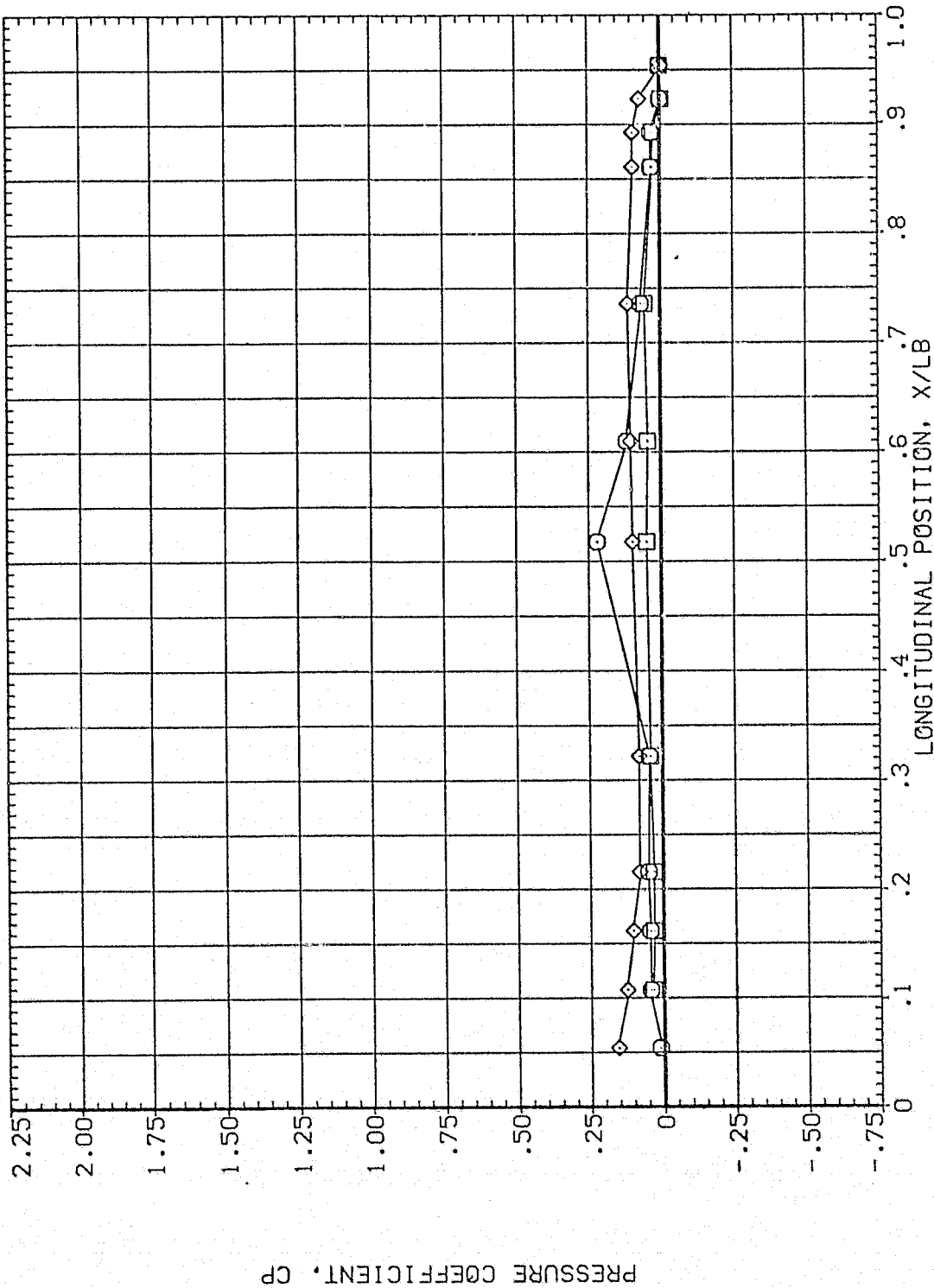


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 536 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A069)

SYMBO	BETA	ALPHA	HACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
112.500	71.660	4.930		2.000	.000	80.000
135.000						
157.500						

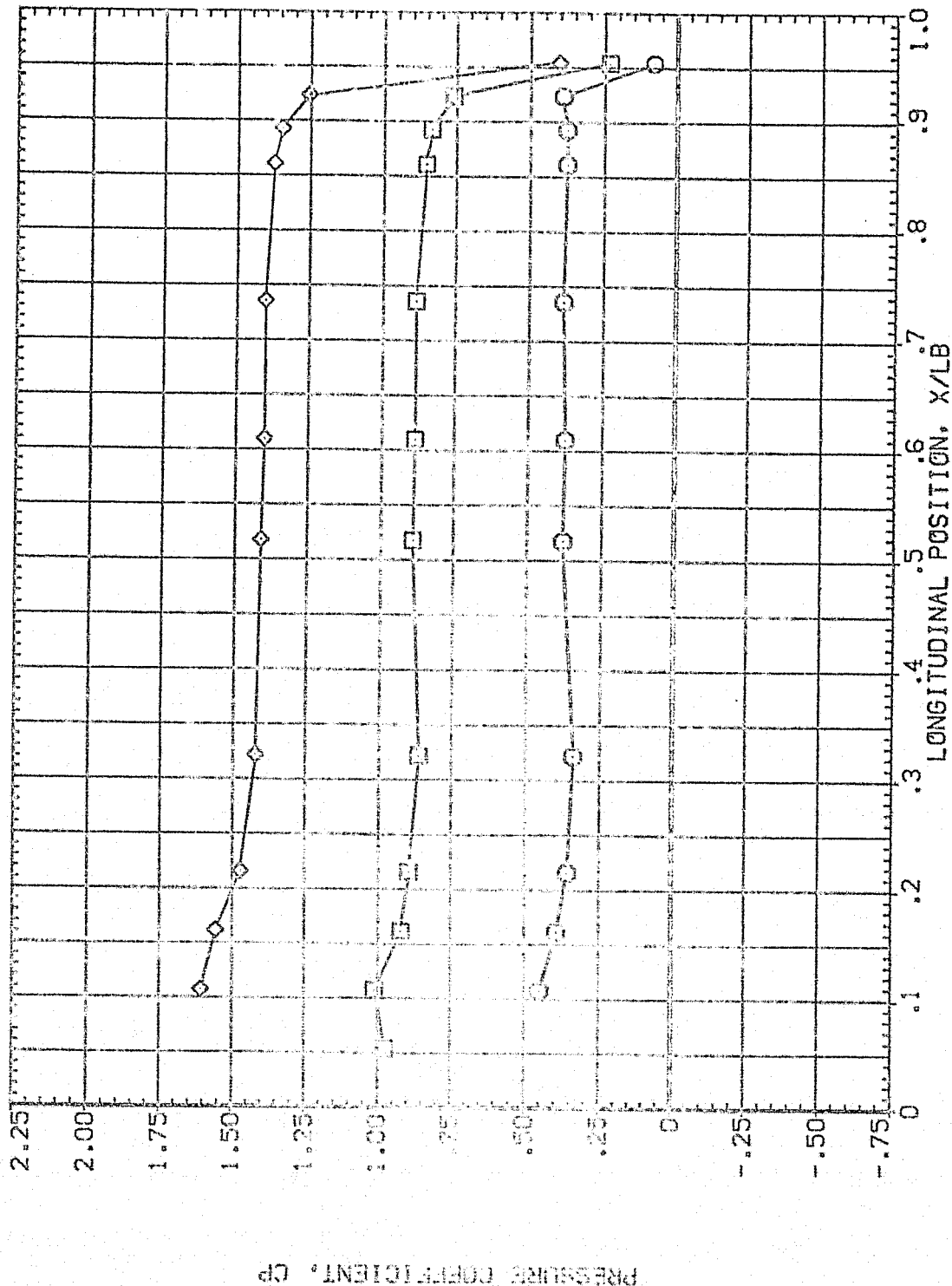


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	71.880	4.960	MOUNT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				80.000
					.000

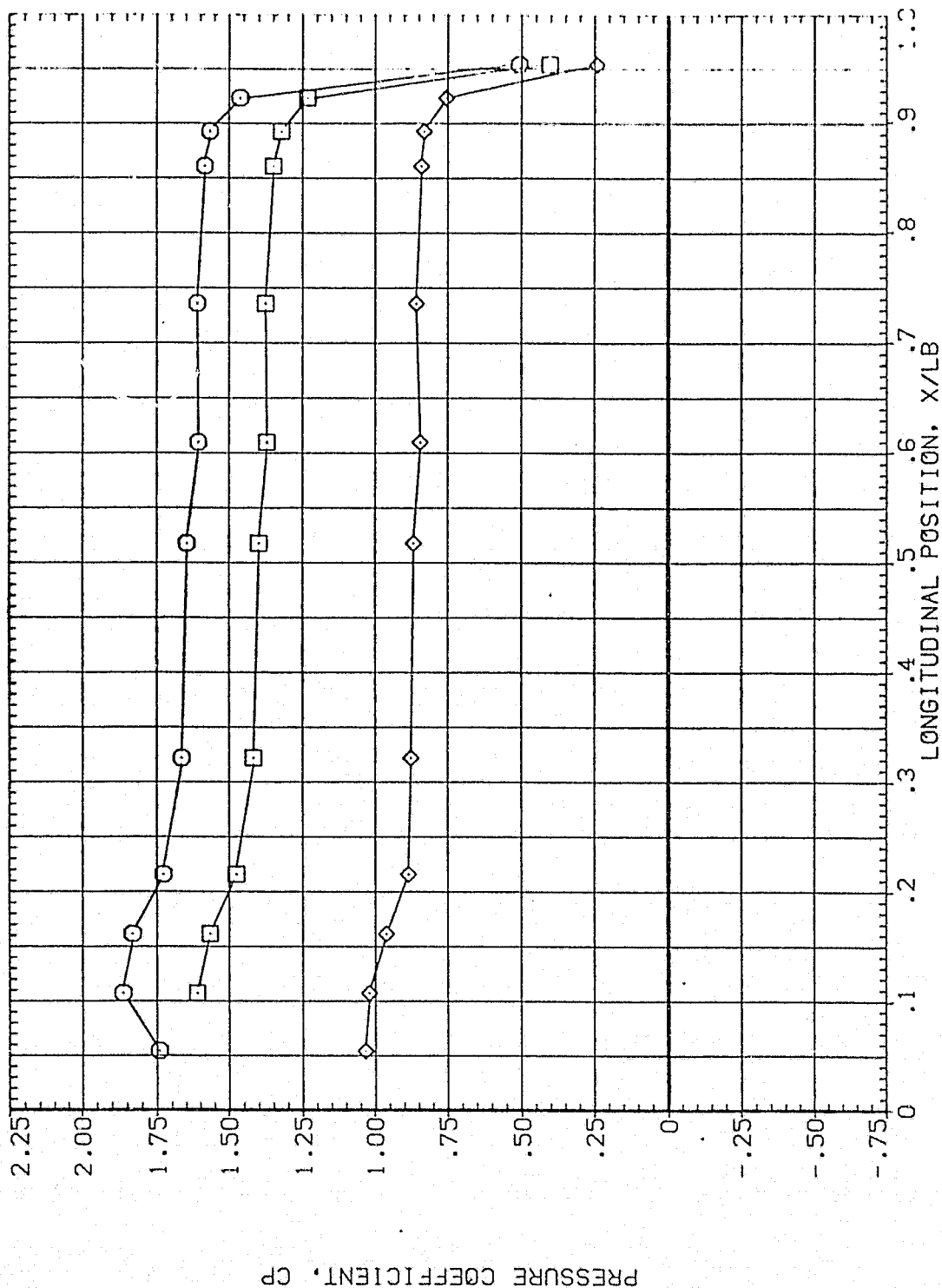


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A069)

SYMBOL THETA ALPHA MACH
 O 247.500 71.880 4.960
 □ 270.000
 ◇ 292.500

PARAMETRIC VALUES
 BETA .000 OFFSET 80.000
 MOUNT 2.000 PHI .000

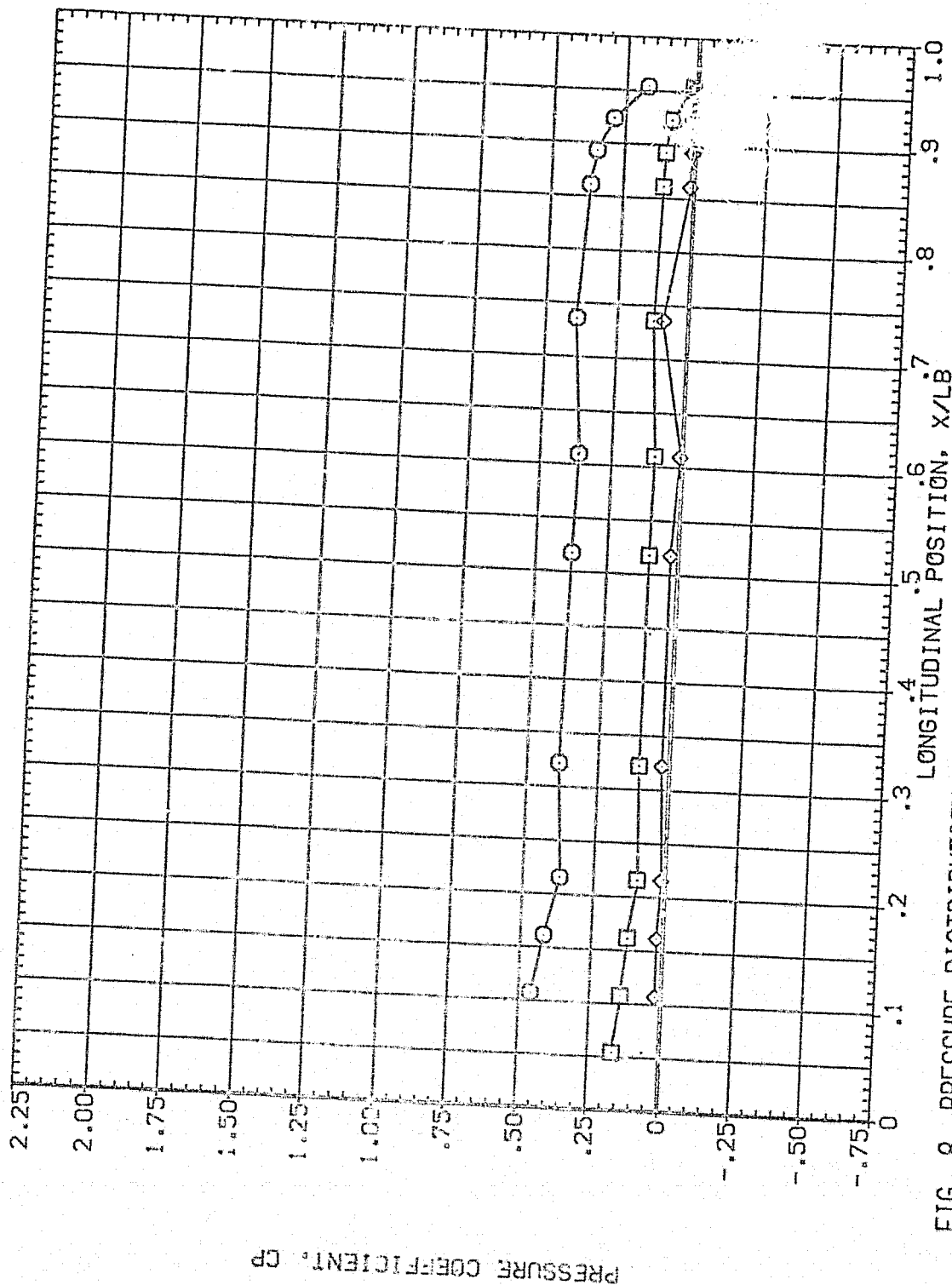


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	71.880	4.960	HOUNT	.000 OFFSET
□	326.000			2.000	PHI
◇	346.000				80.000

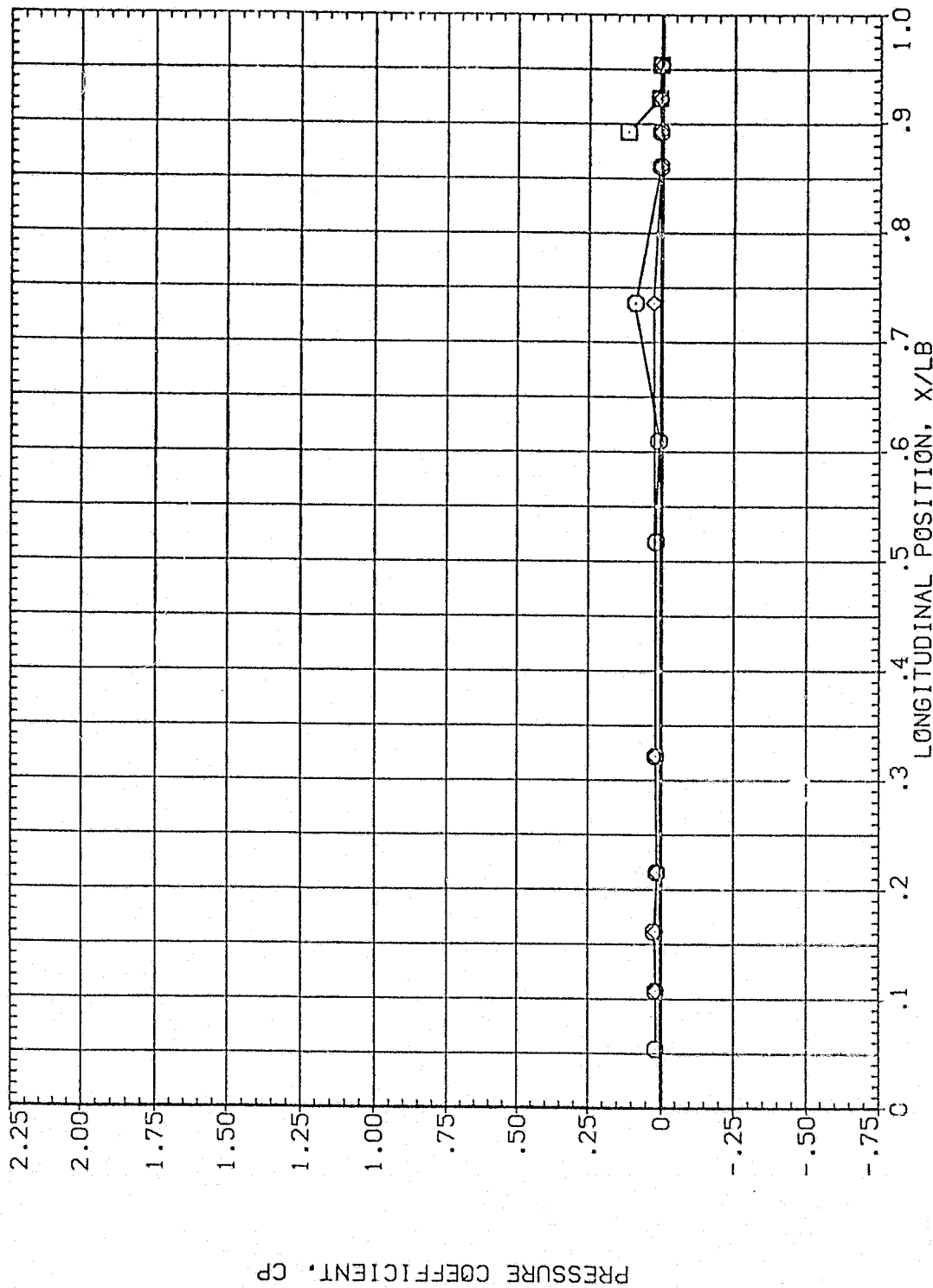


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.000	74.860	4.960	.000	.000	.000
□	14.000			2.000		
◇	24.000					

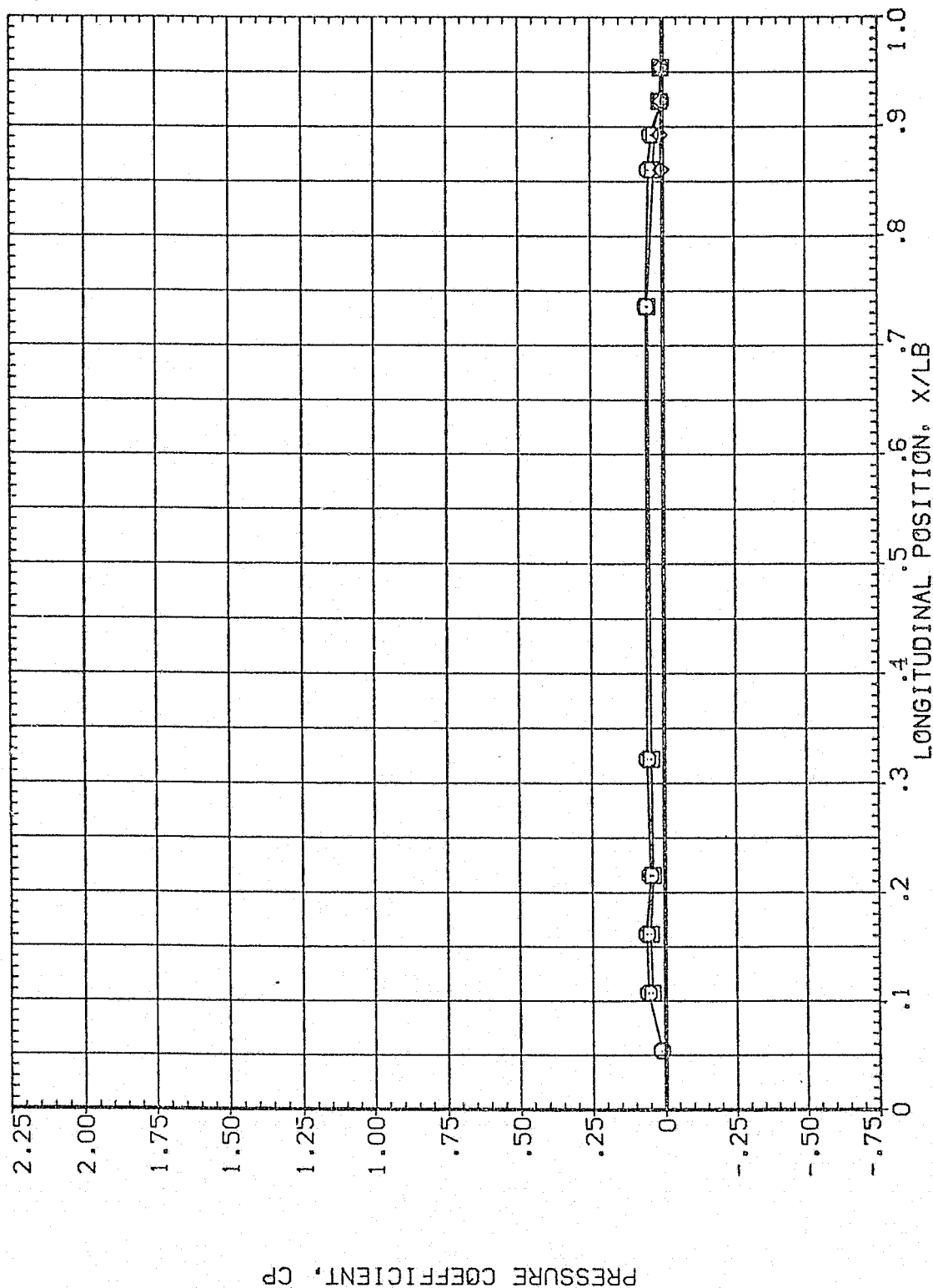


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	74.860	4.960	MOUNT	.000
□	67.500			PHI	2.000
◇	90.000				80.000
					.000

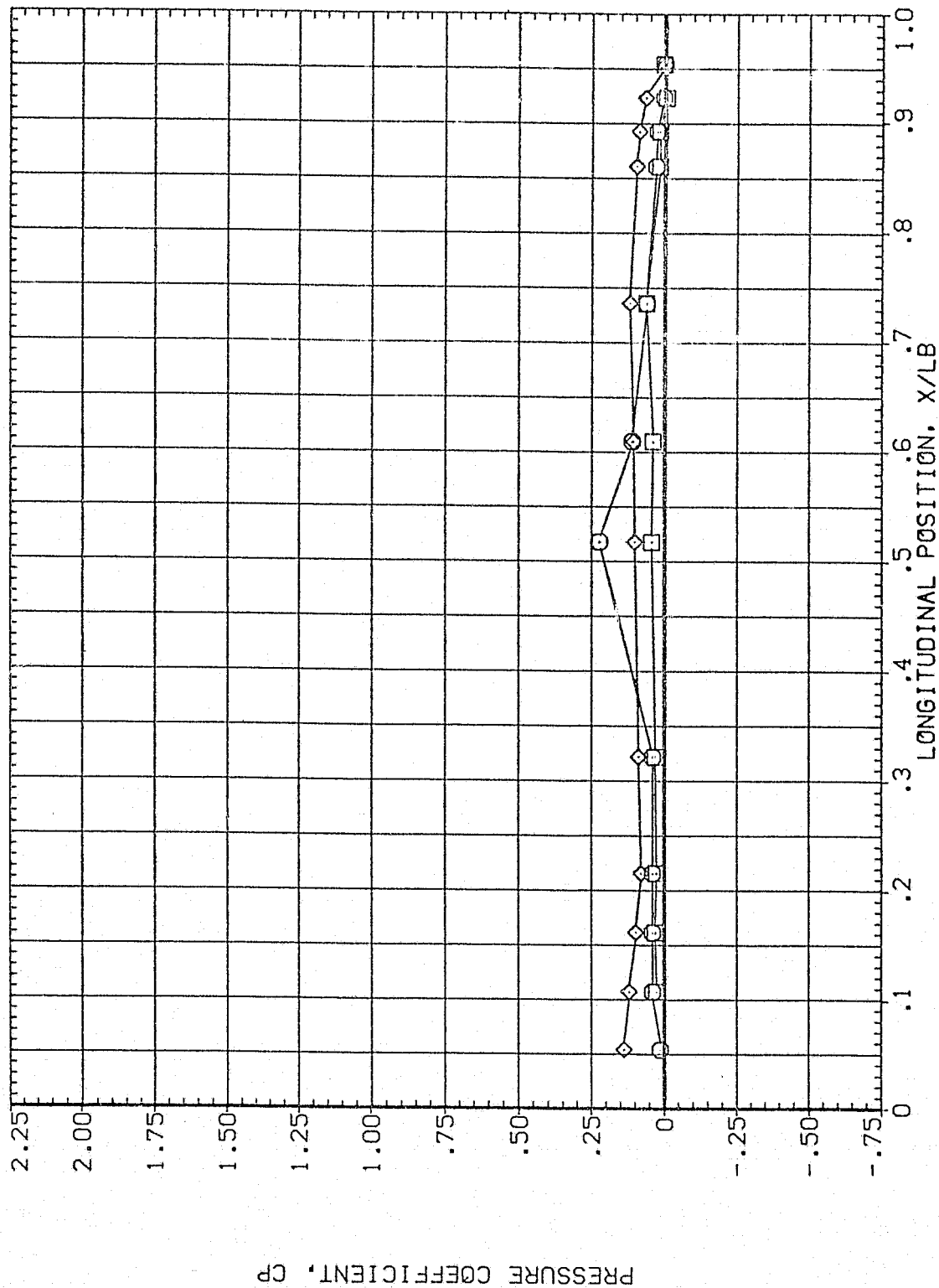


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	74.860	4.950	HOUNT	.000	.000
□	135.000				2.000	
◇	157.500					

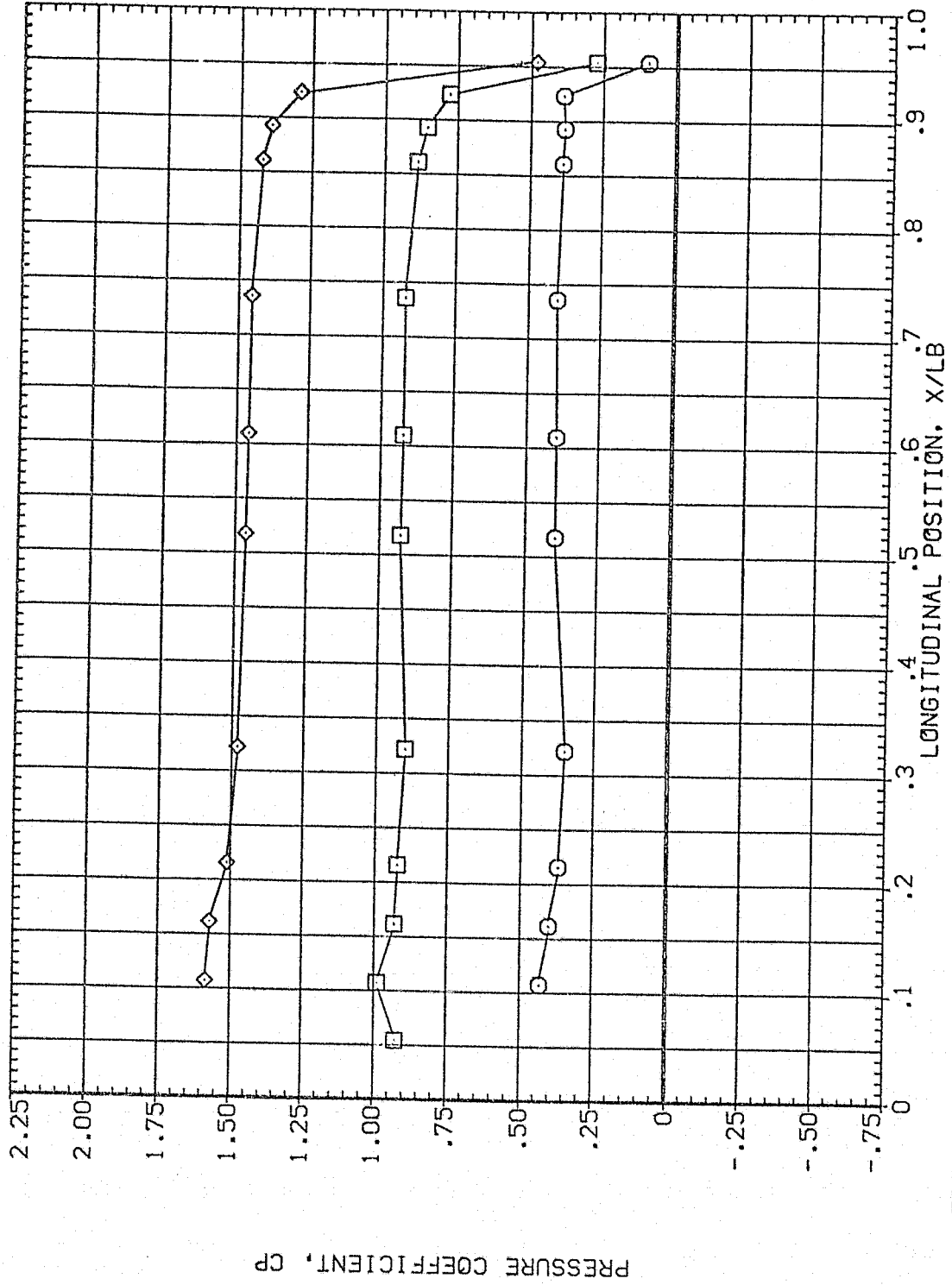


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	74.860	4.960	MOUNT	.000 OFFSET PHI
□	202.500				2.000
◇	225.000				80.000

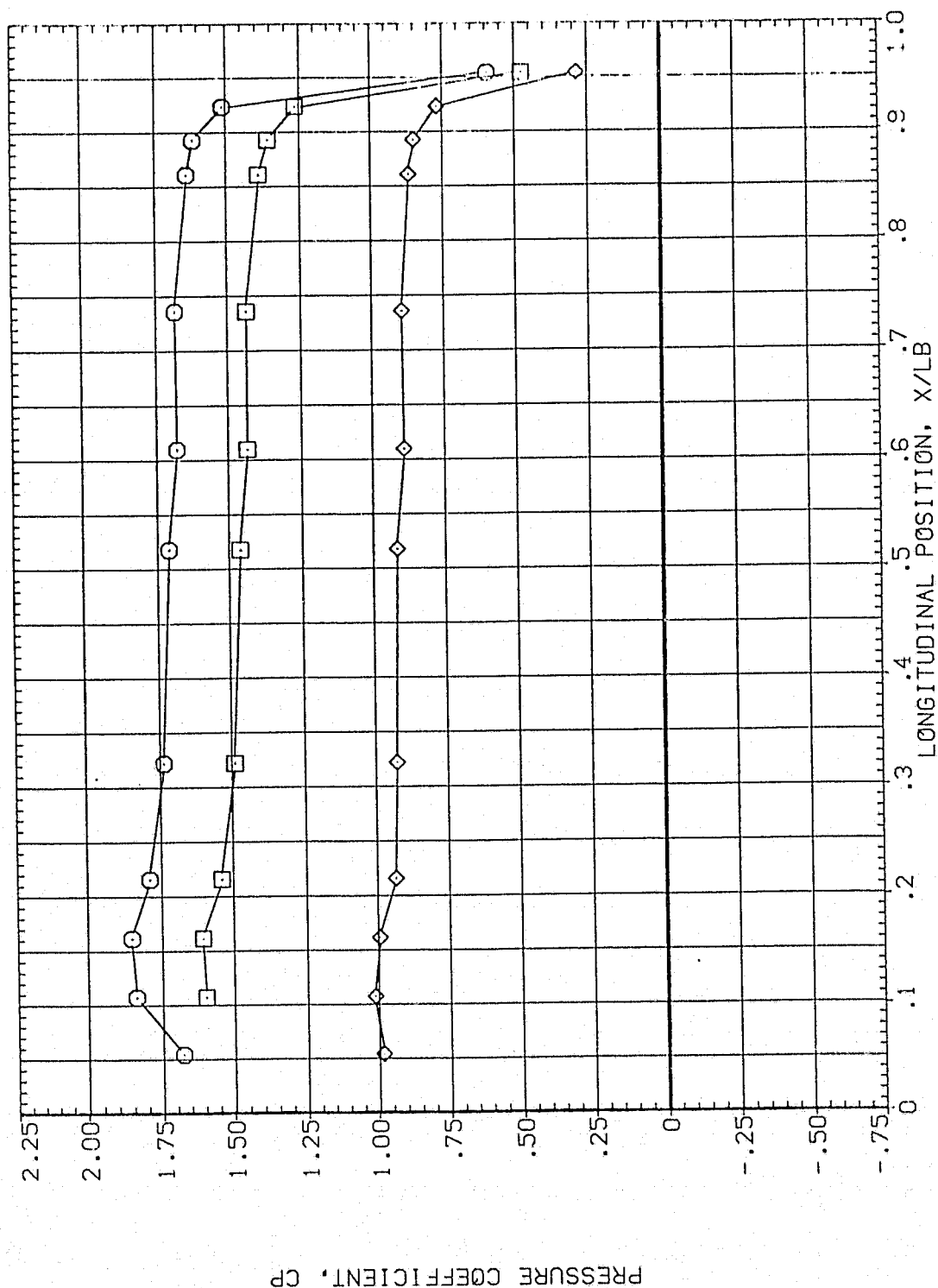


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL

THETA
247.500
250.000
252.500

ALPHA
74.860

H/CH
4.960

PARAMETRIC VALUES
BETA
MOUNT
2.000
OFFSET
PHI
80.000
.000

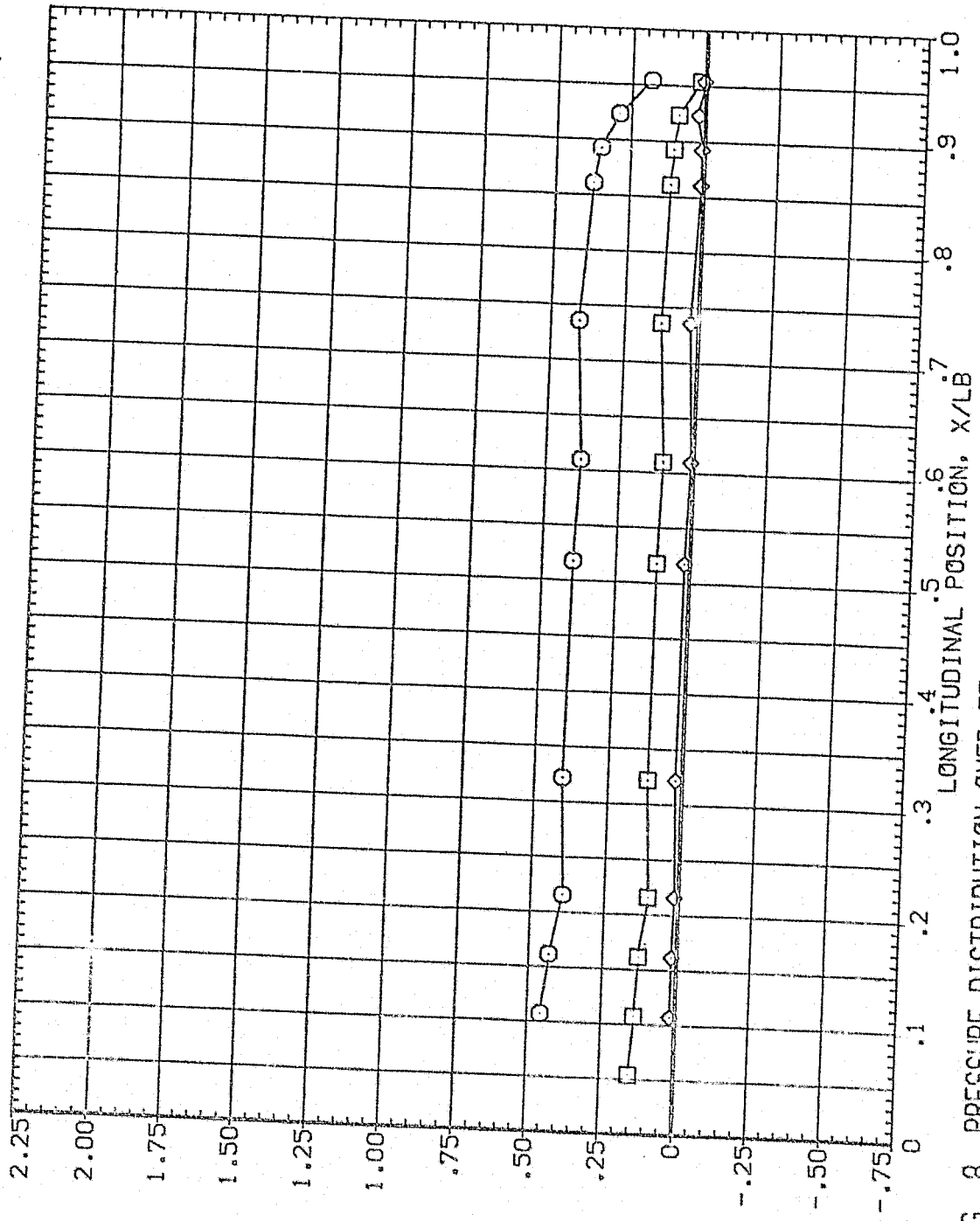


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	74.860	4.960	MCJNT	.000 OFFSET
□	326.000				2.000 PHI
◇	346.000				80.000

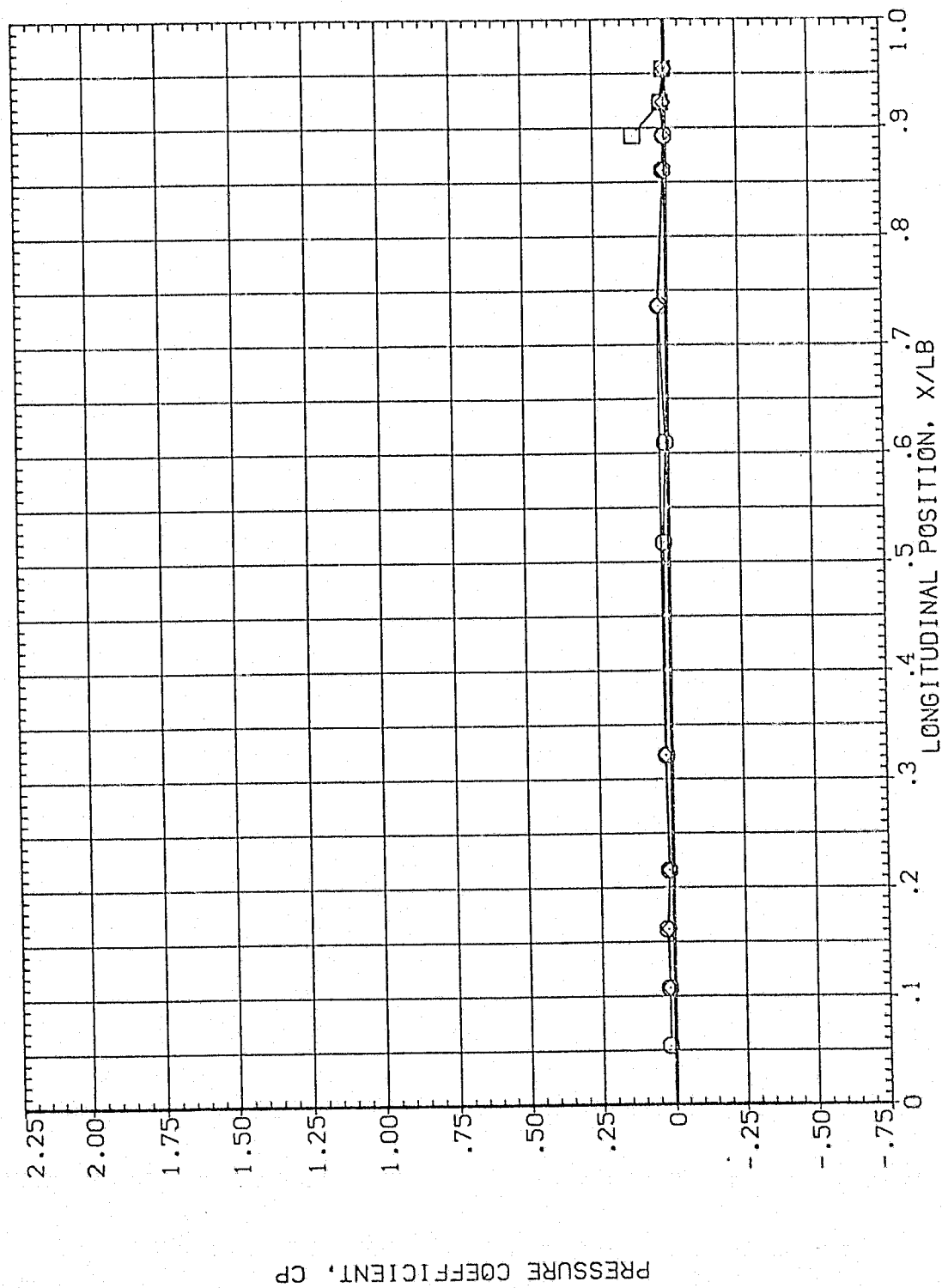


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

CP1A0710

MODEL 500 (TA-25) MCR3200 EXTERNAL TANK, T2

PARAMETRIC VALUES

BETA .000 80.000
COUNT 2.000 PHI .000

ALPHA 77.880 4.950
MECH 14.000 24.000

5.000
10.000
15.000
20.000

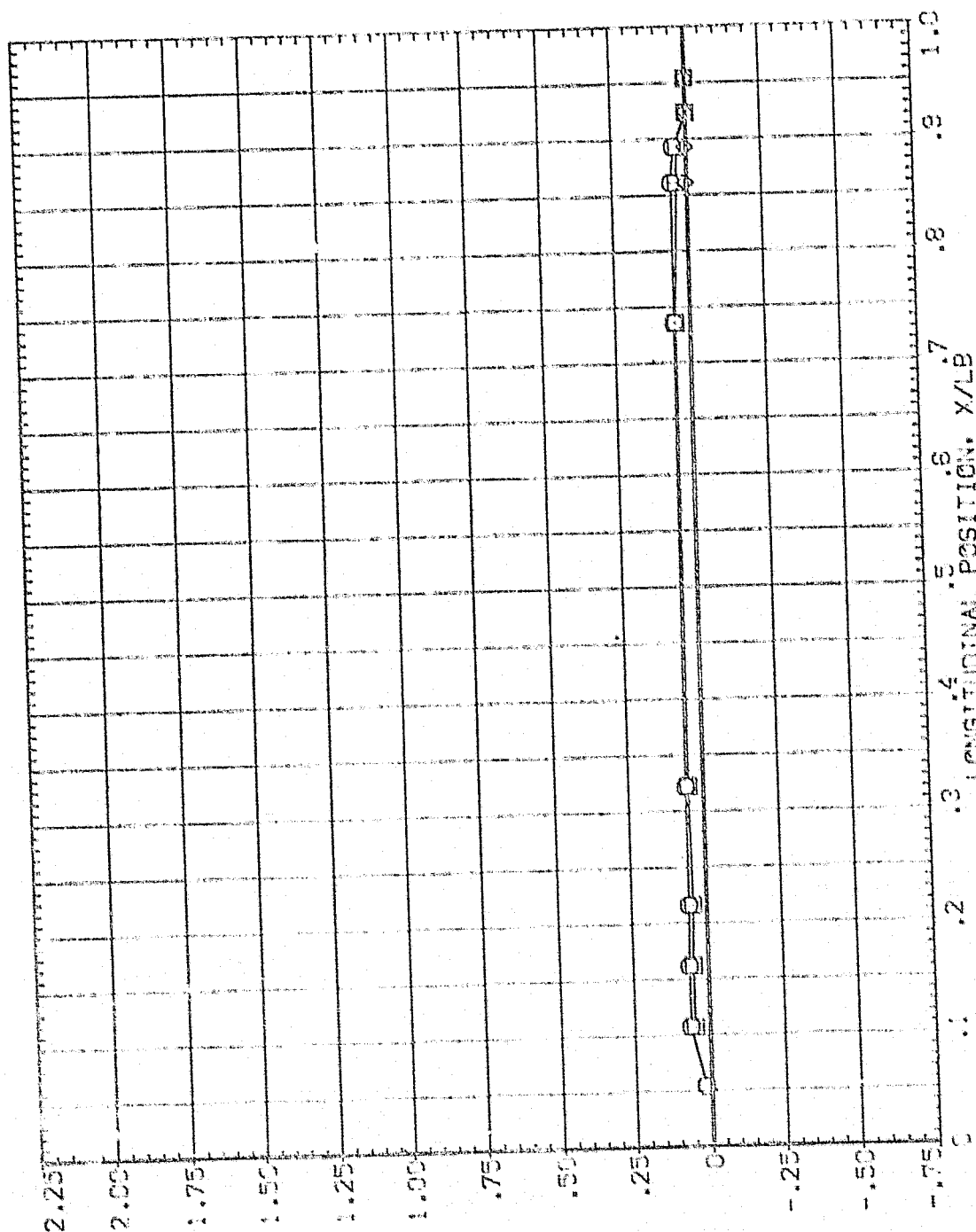


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTRUSIONS

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	77.880	4.960	MOUNT	.000 OFFSET
□	67.500				2.000 PHI
◇	90.000				80.000 .000

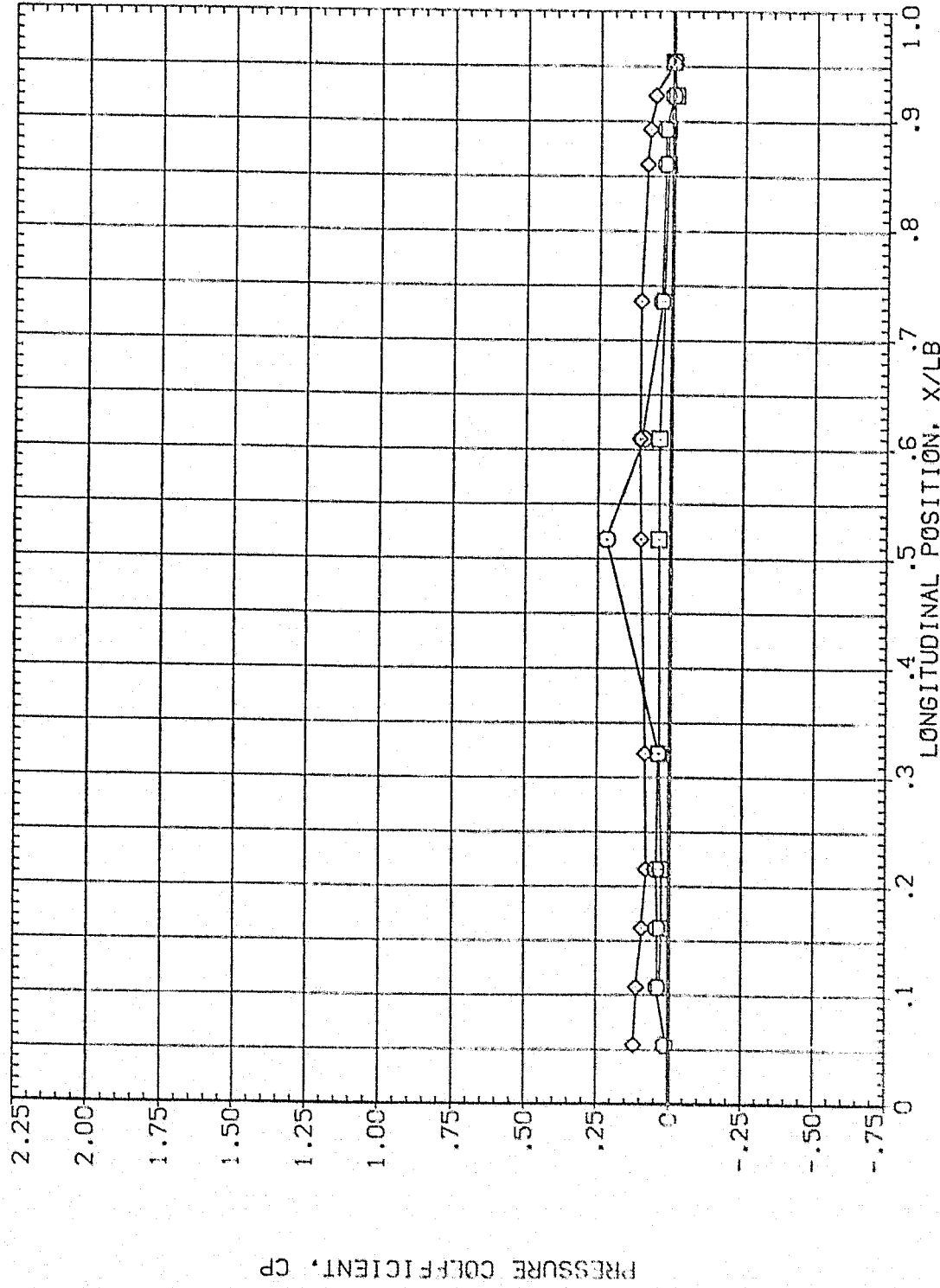


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	112.500	77.880	4.960	HOUNT	OFFSET
□	135.000				PHI
◇	157.500				

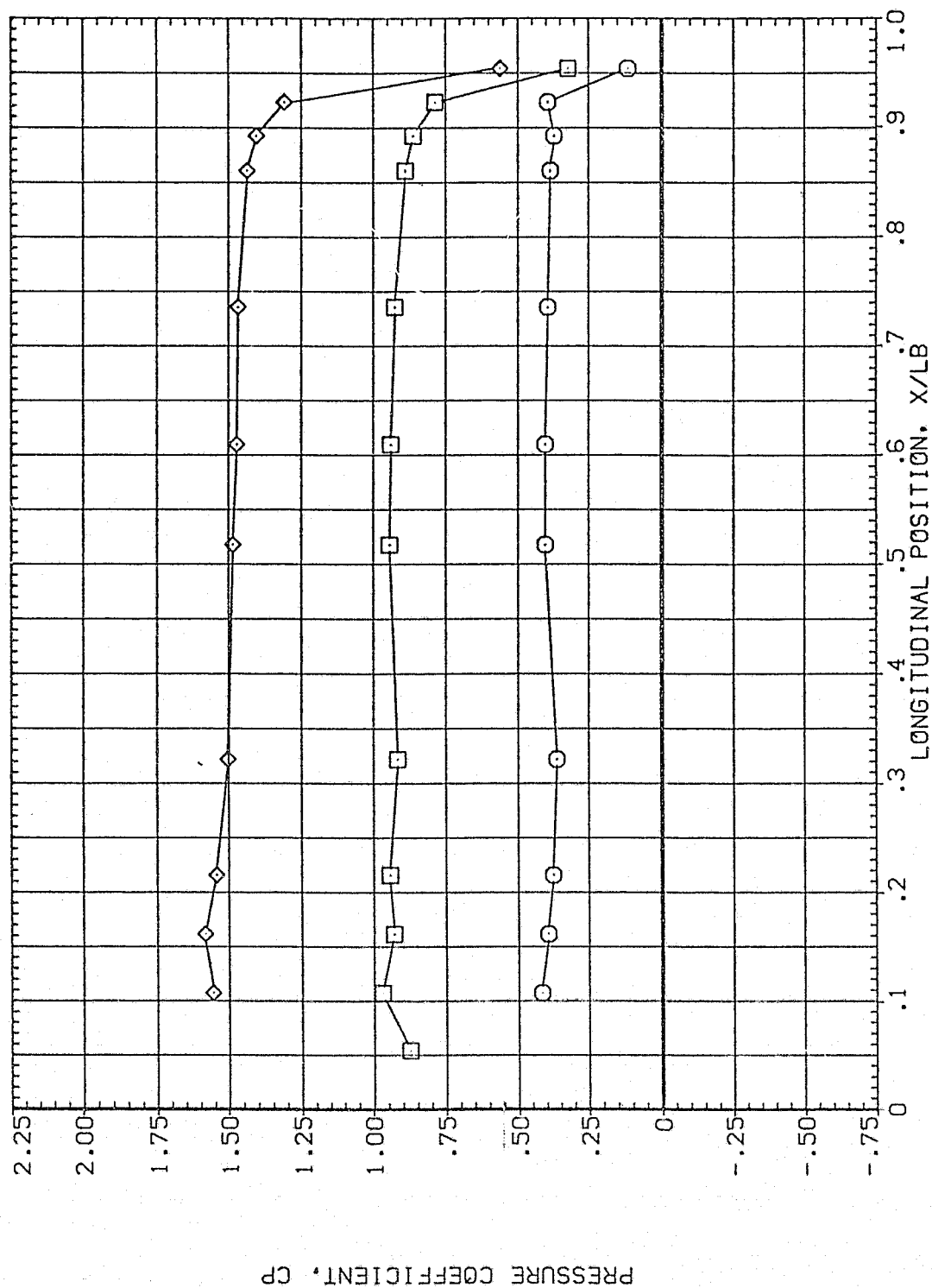


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	77.880	4.960	HOUNT	.000 OFFSET PHI
□	202.500				2.000
◇	225.000				80.000 .000

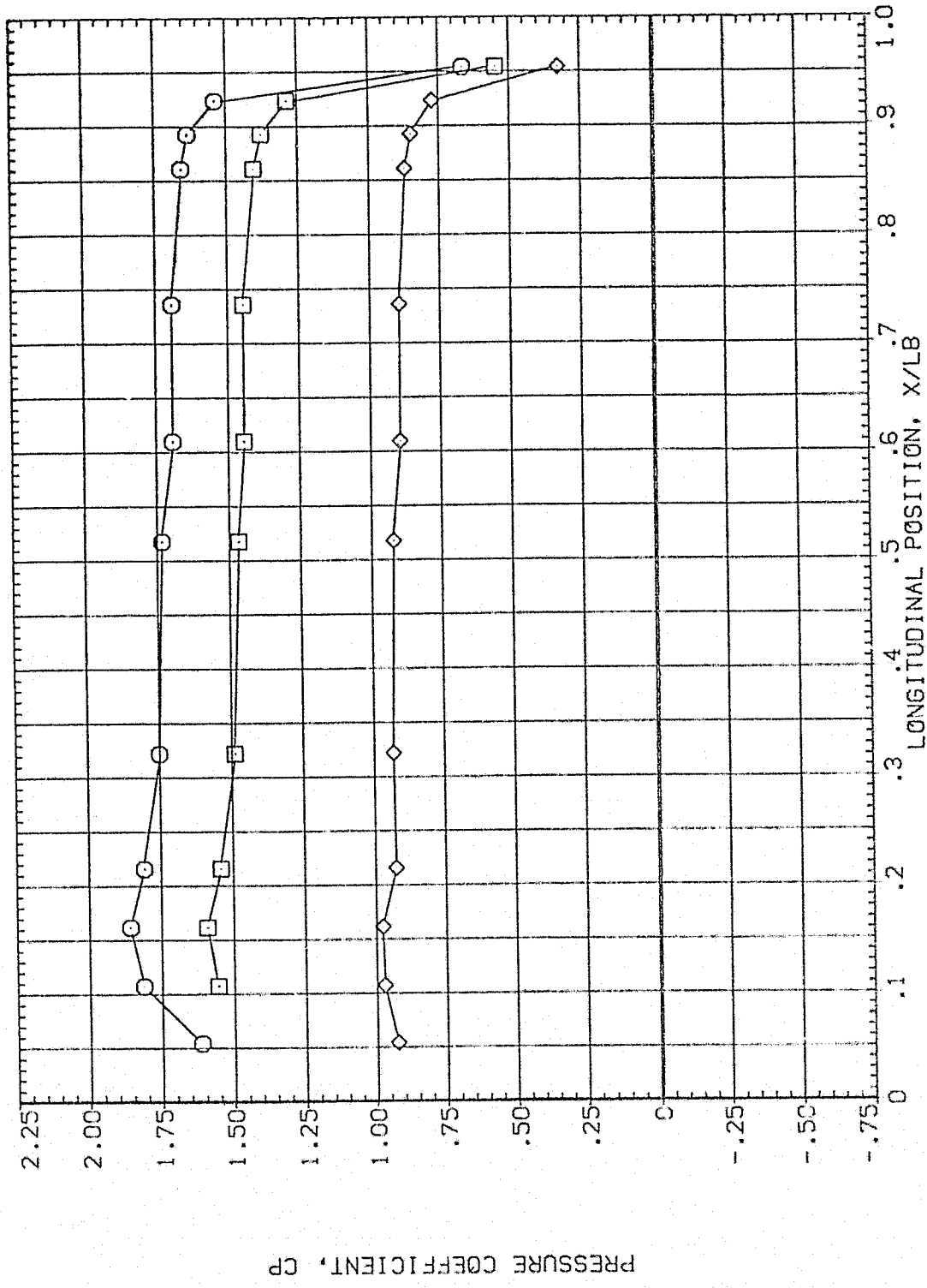


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
 ○
 □
 ◇

THEIA
 247.500
 270.000
 292.500

ALPHA
 77.600
 4.980

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 .000
 .000

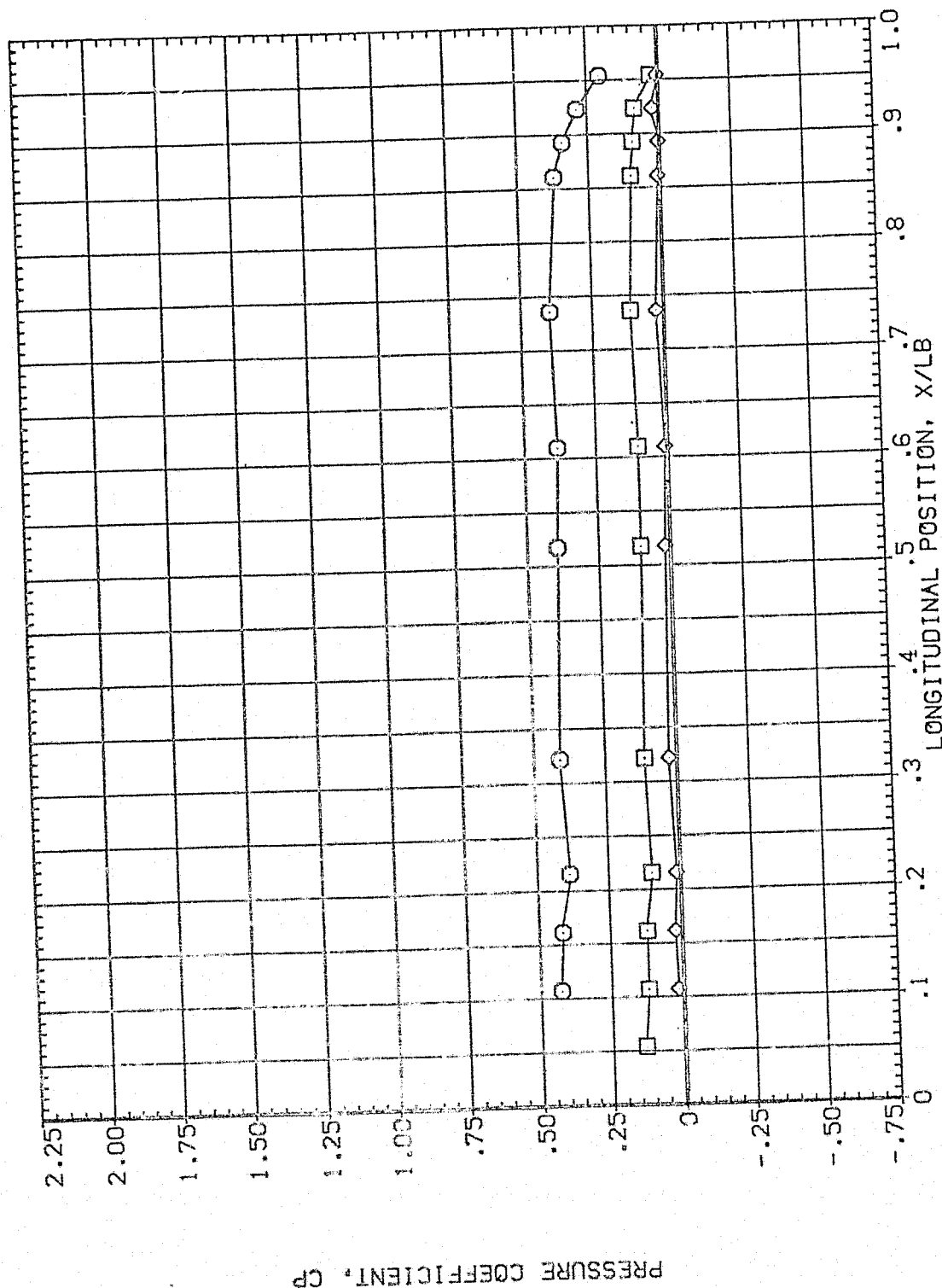


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	315.000	77.880	4.960	MOUNT	.000
□	326.000				2.000
◇	346.000				80.000
					PHI
					.000

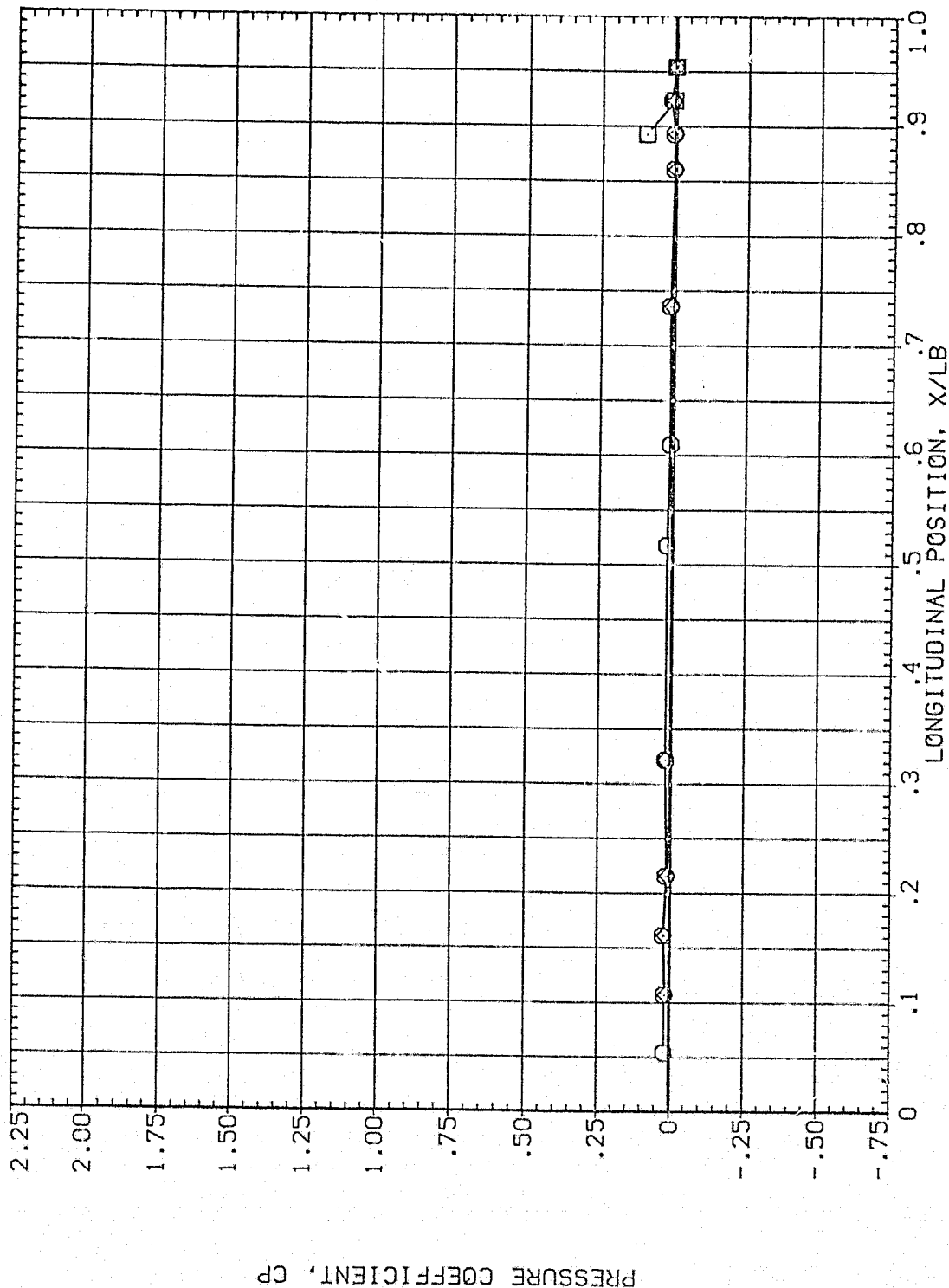


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES		
	.000	14.000	79.930	24.000	4.960	24.000	BETA	OFFSET	PHI
○							MOUNT	.000	90.000
□								2.000	
◇									.000

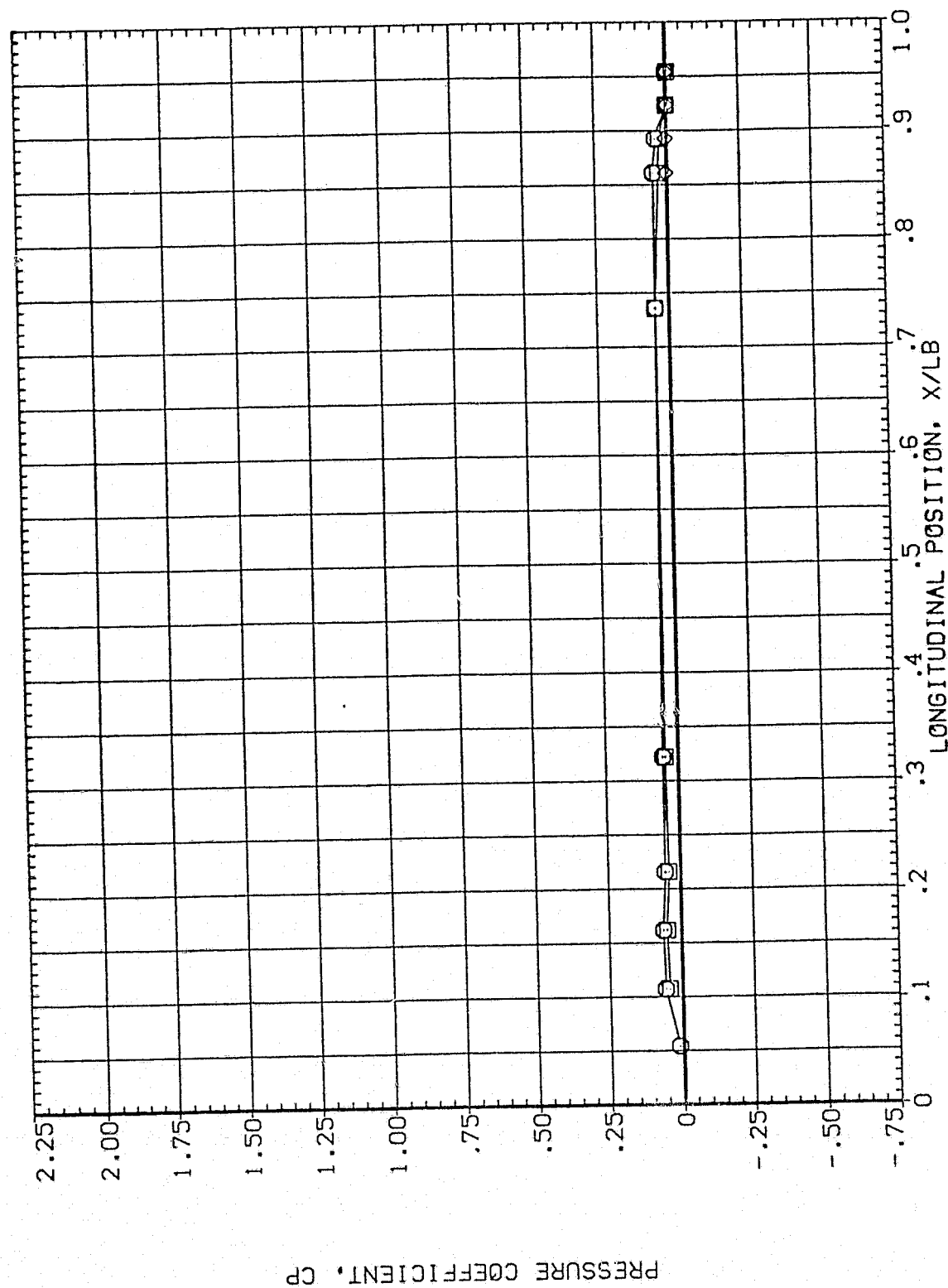


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL THETA ALPHA MACH
 O 45.000 79.930 4.960
 □ 67.500
 ◇ 90.000

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

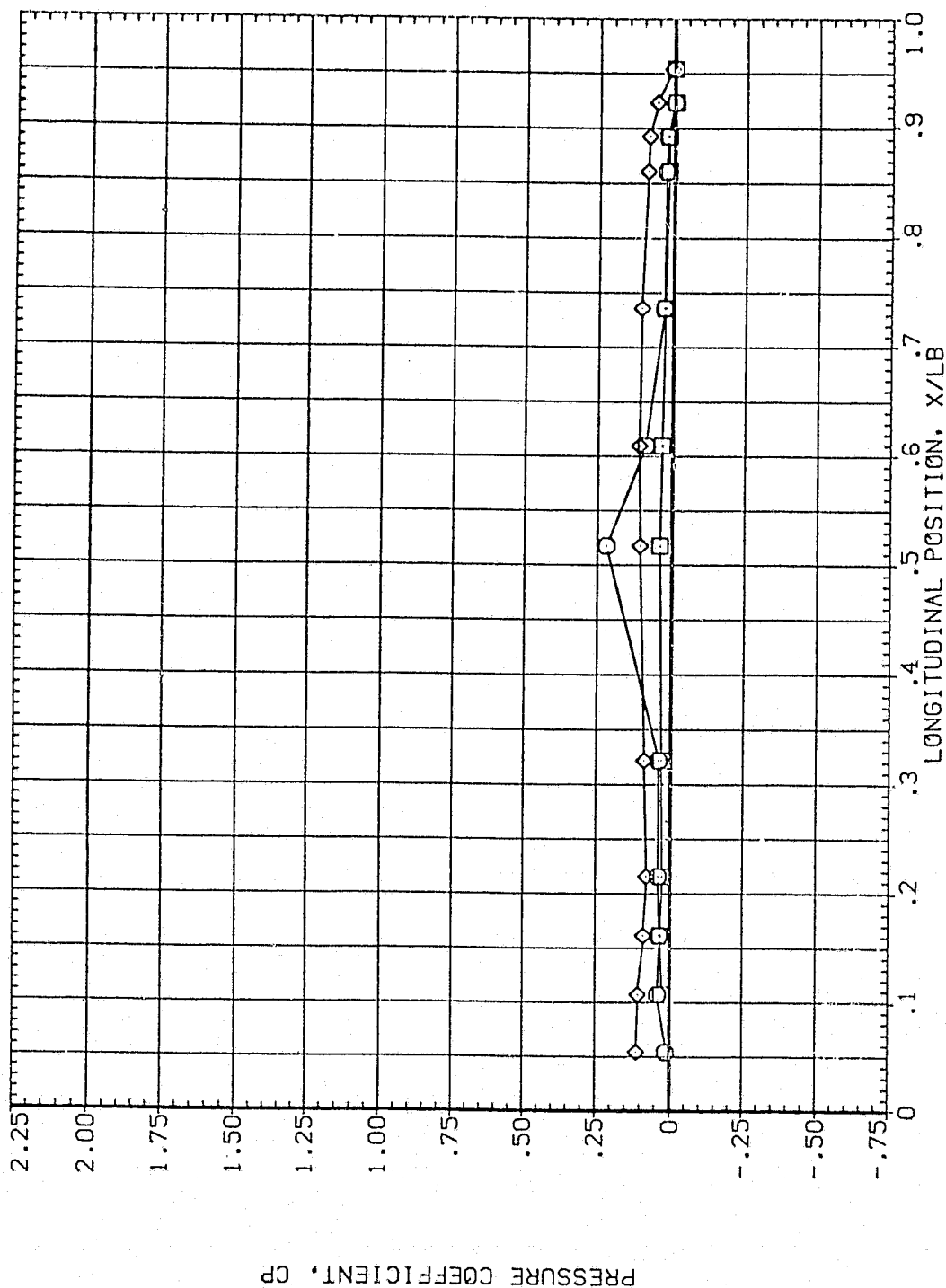


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T2 (P1A072)

SYMBOL	THEYA	ALPHA	INCH	BETA	PARAMETRIC VALUES
○	112.500	79.930	4.960	MOUNT	.000
□	135.000			OFFSET	2.000
◇	157.500			PHI	.000

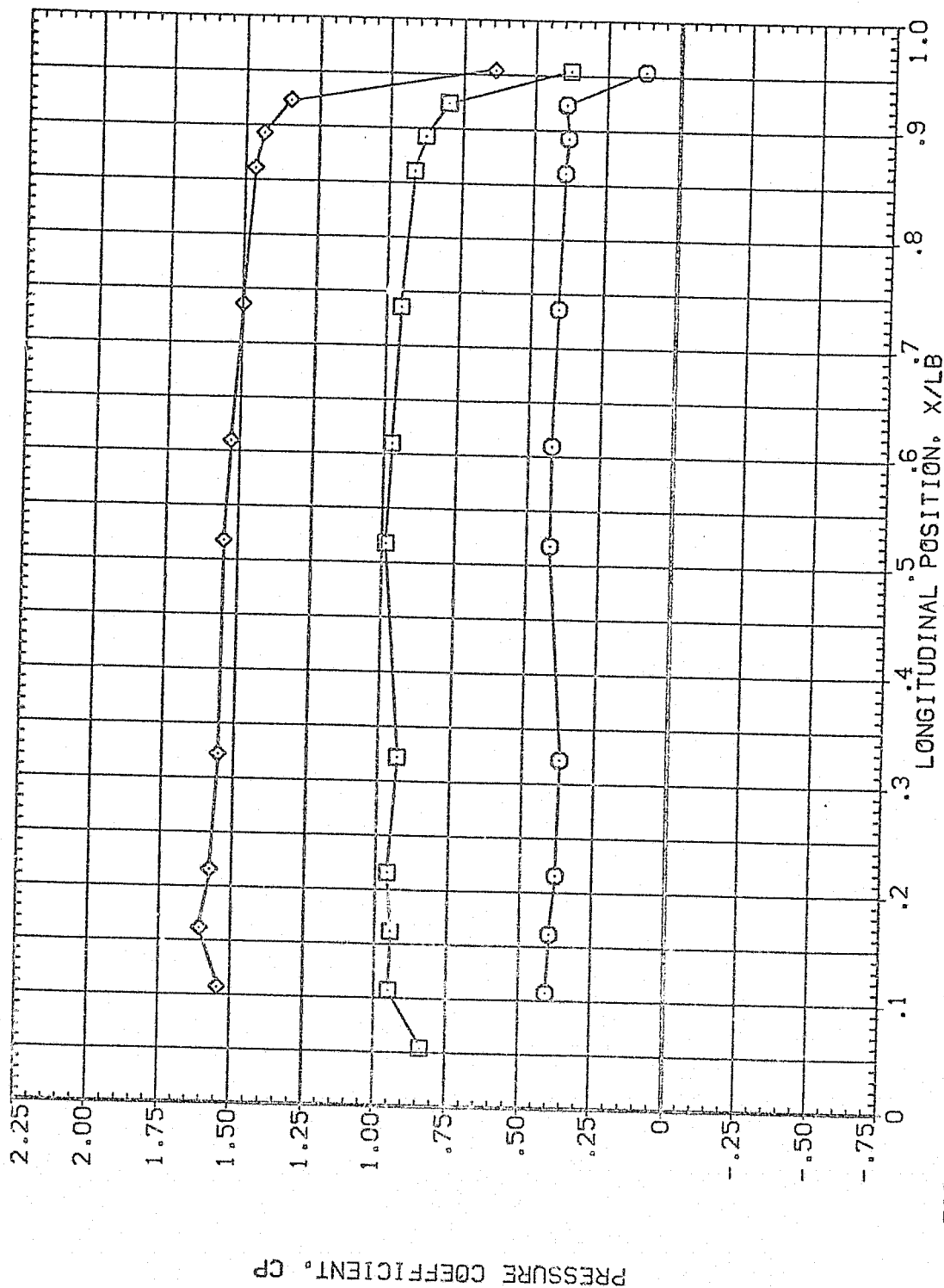


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 PHI 90.000
 .000

SYMBOL
 180.000
 202.500
 225.000

THETA
 79.930
 4.960

ALPHA
 79.930
 4.960

MACH
 79.930
 4.960

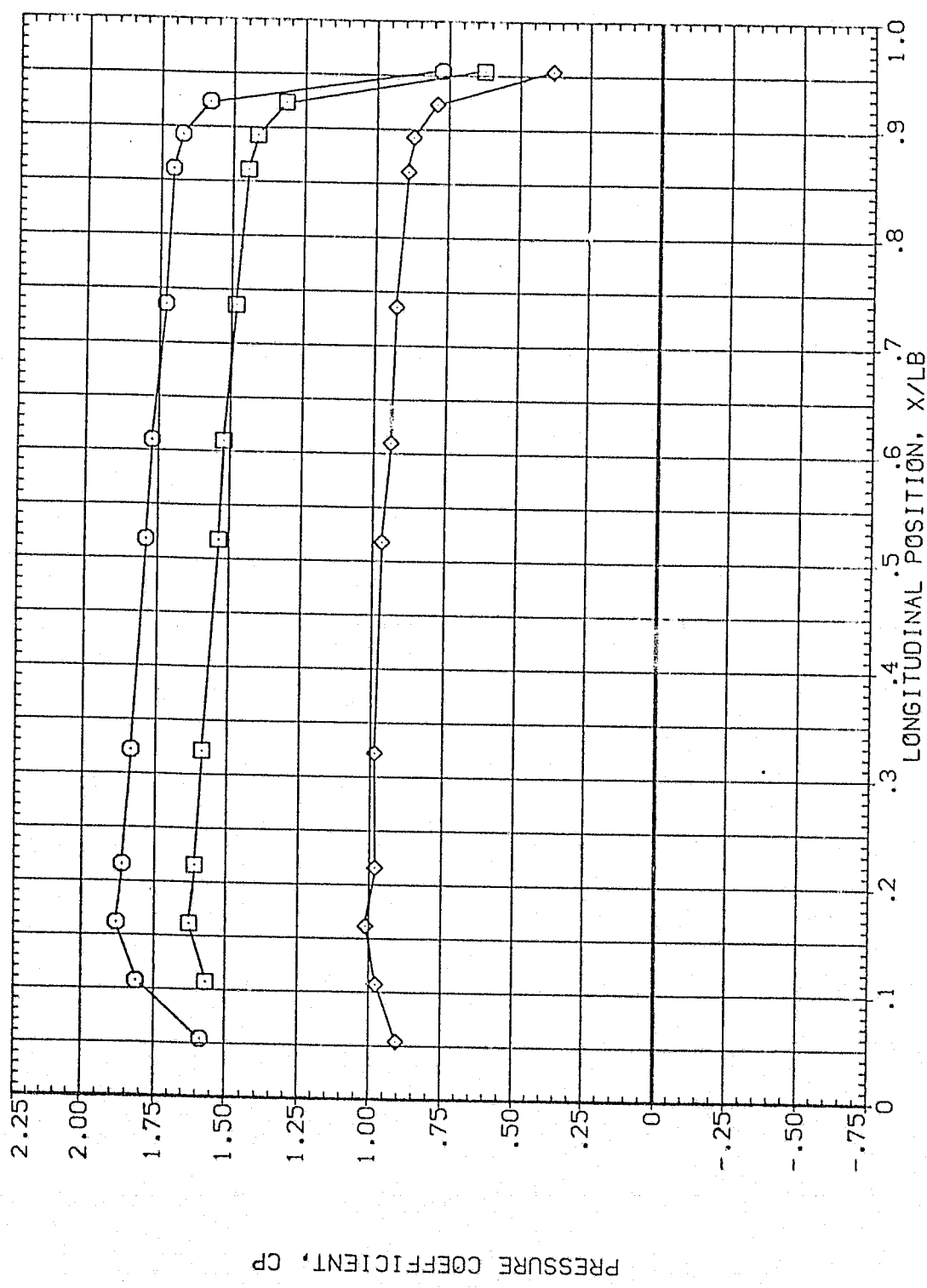


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A072)

SYMBOL

THETA
247.500
270.000
292.500

ALPHA
75.930

LATCH
4.560

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
OFFSET
PHI
50.000
.000

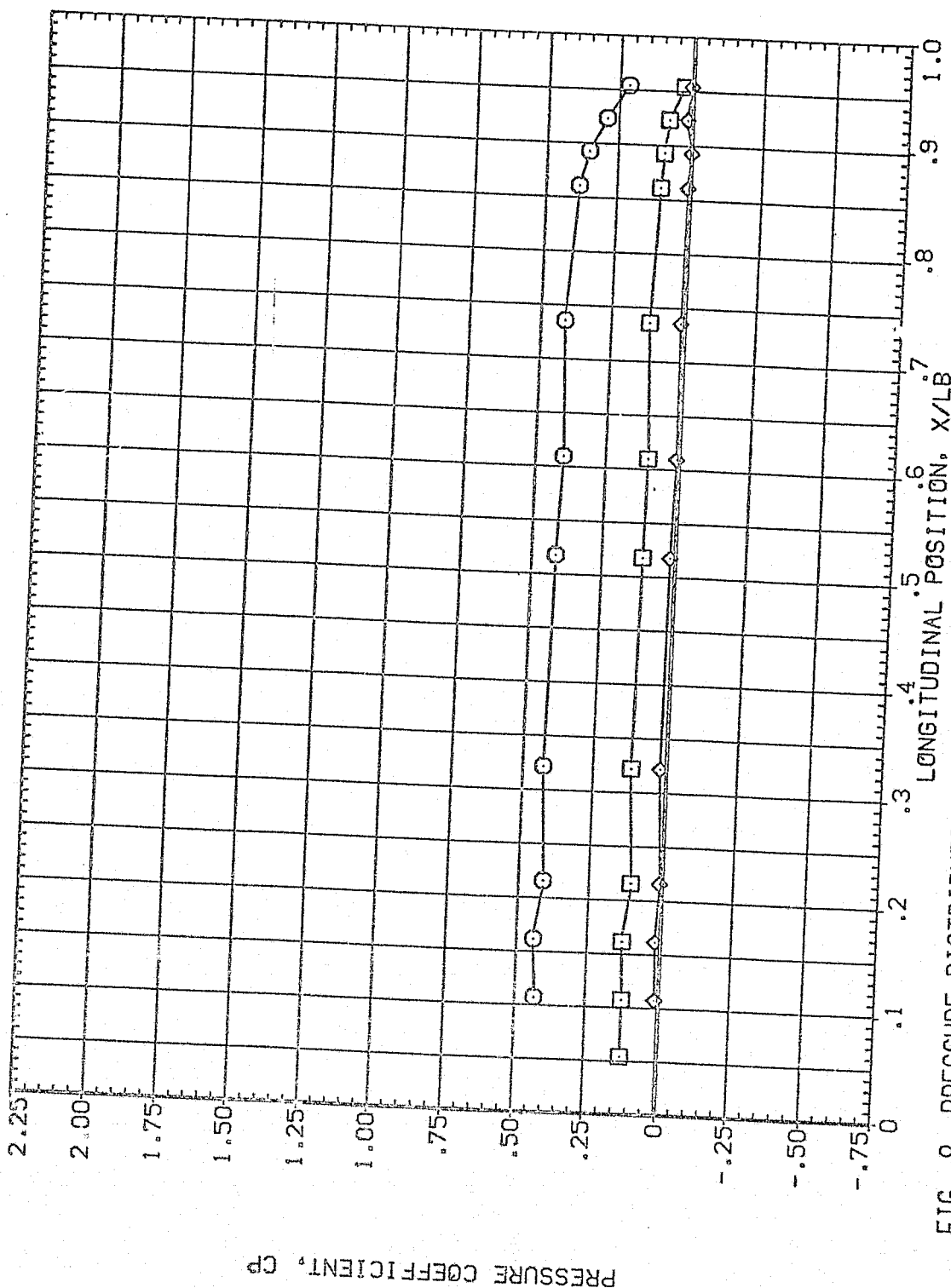


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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ORIGINAL PAGE IS POOR

(P1A072)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL
□
◇

THETA
315.000
326.000
346.000

ALPHA
79.930

MACH
4.960

BETA
MCUNT

PARAMETRIC VALUES
.000
2.000

OFFSET
PHI
90.000
.000

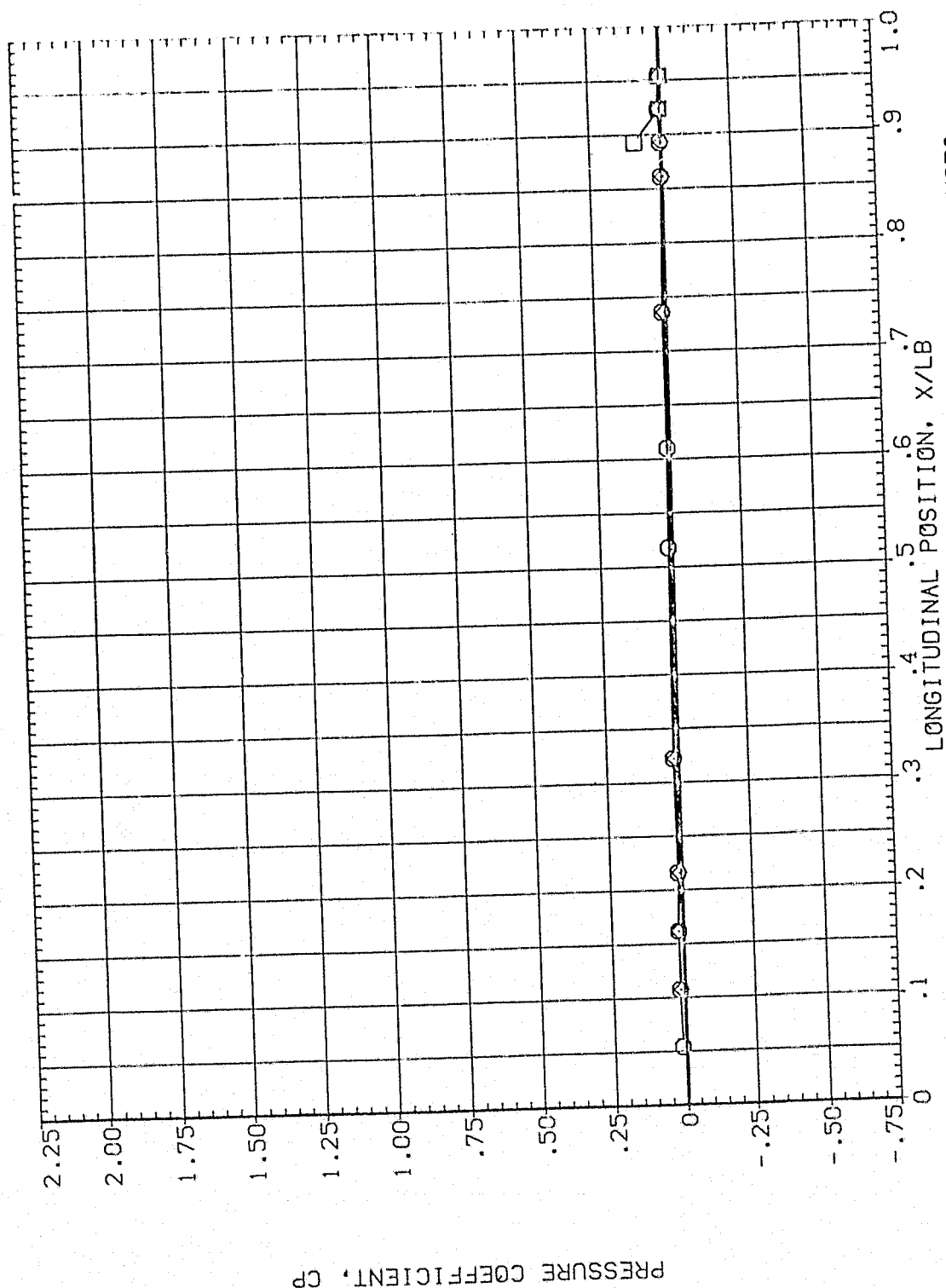


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
□
◇

THETA
.000
14.000
24.000

ALPHA
81.830

MACH
4.960

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
90.000
OFFSET
PHI
.000

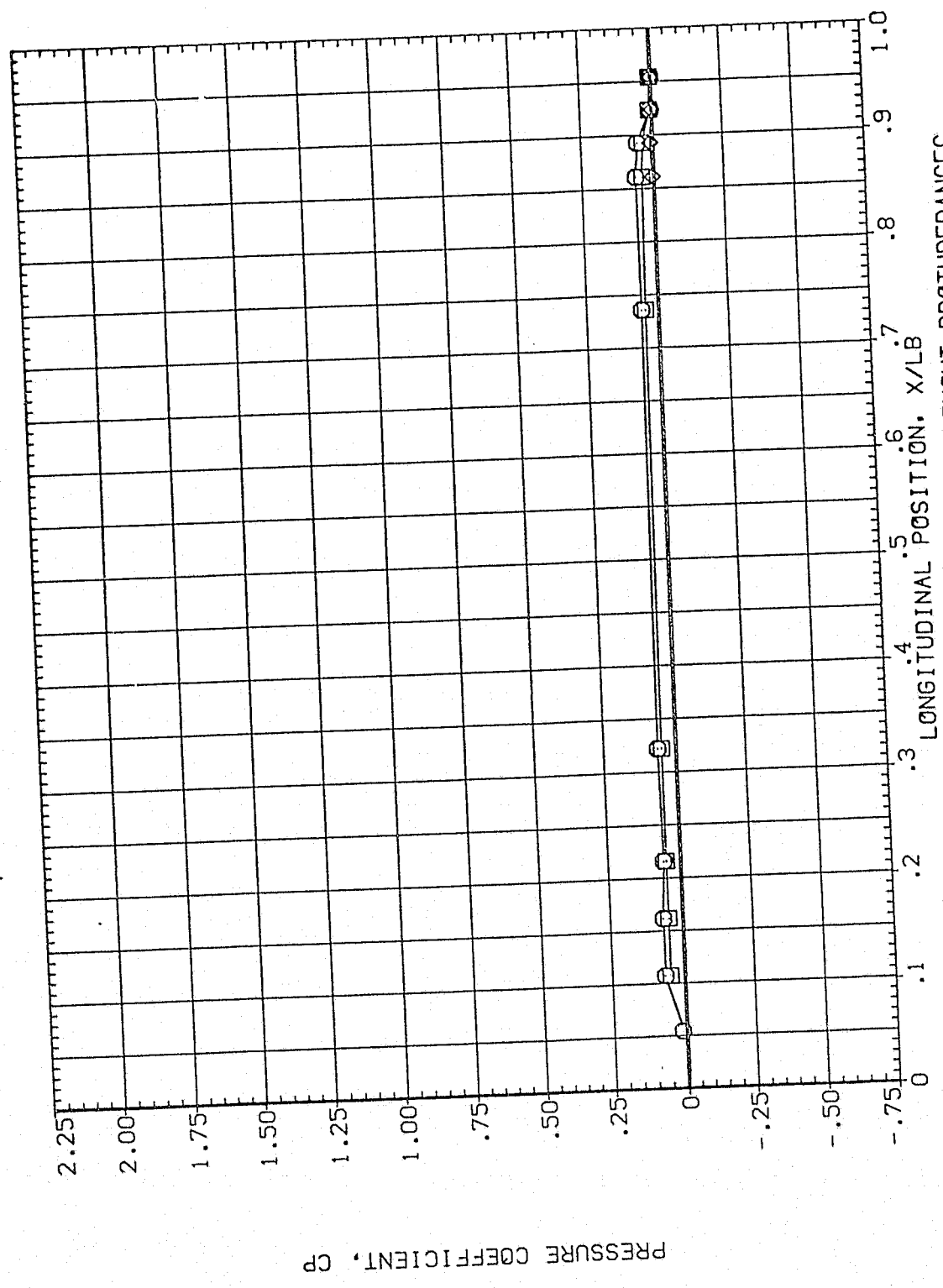


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	81.830	4.980	MOUNT	.000 OFFSET
□	67.500				2.000 PHI
◇	90.000				

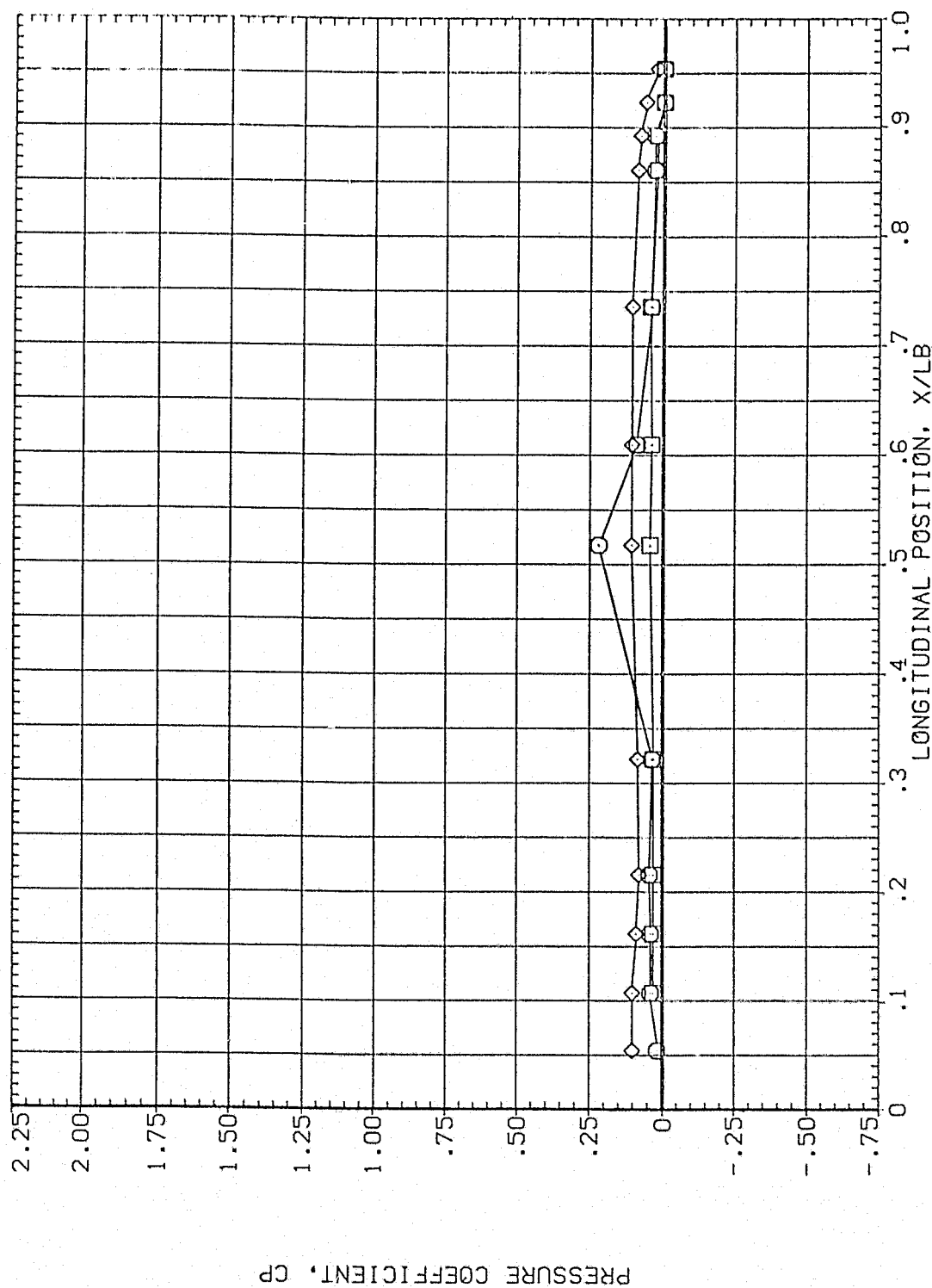


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	THETA		ALPHA	MACH	PARAMETRIC VALUES		
	112.500	135.000			BETA	OFFSET	90.000
○	135.000	157.500	81.830	4.960	Mount	2.000	.000
◇							

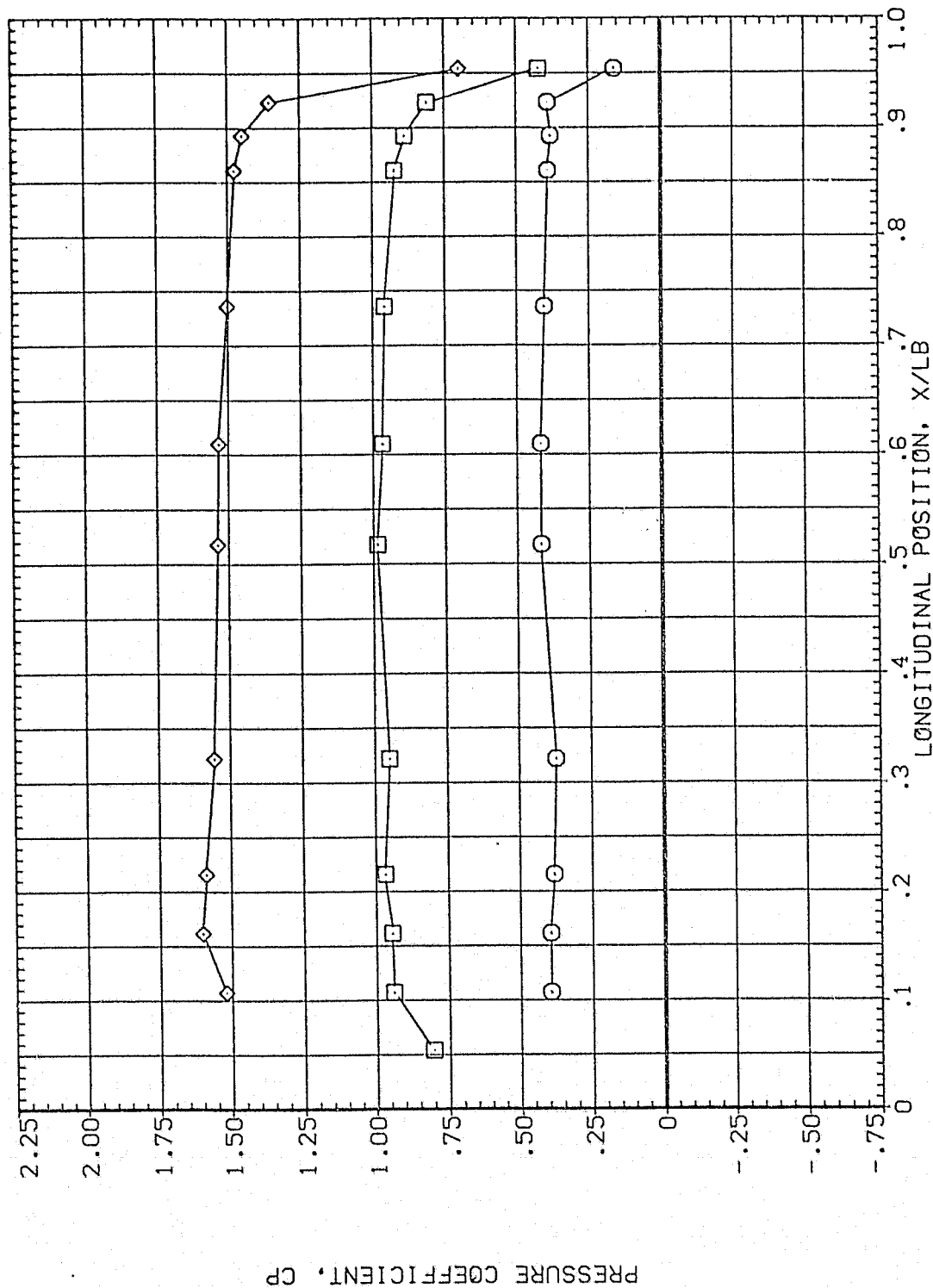


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL
 ○
 □
 ◇

THETA
 180.000
 202.500
 225.000

ALPHA
 81.830

MACH
 4.950

BETA
 MOUNT

PARAMETRIC VALUES
 .000 2.000 90.000
 PHI OFFSET

.000

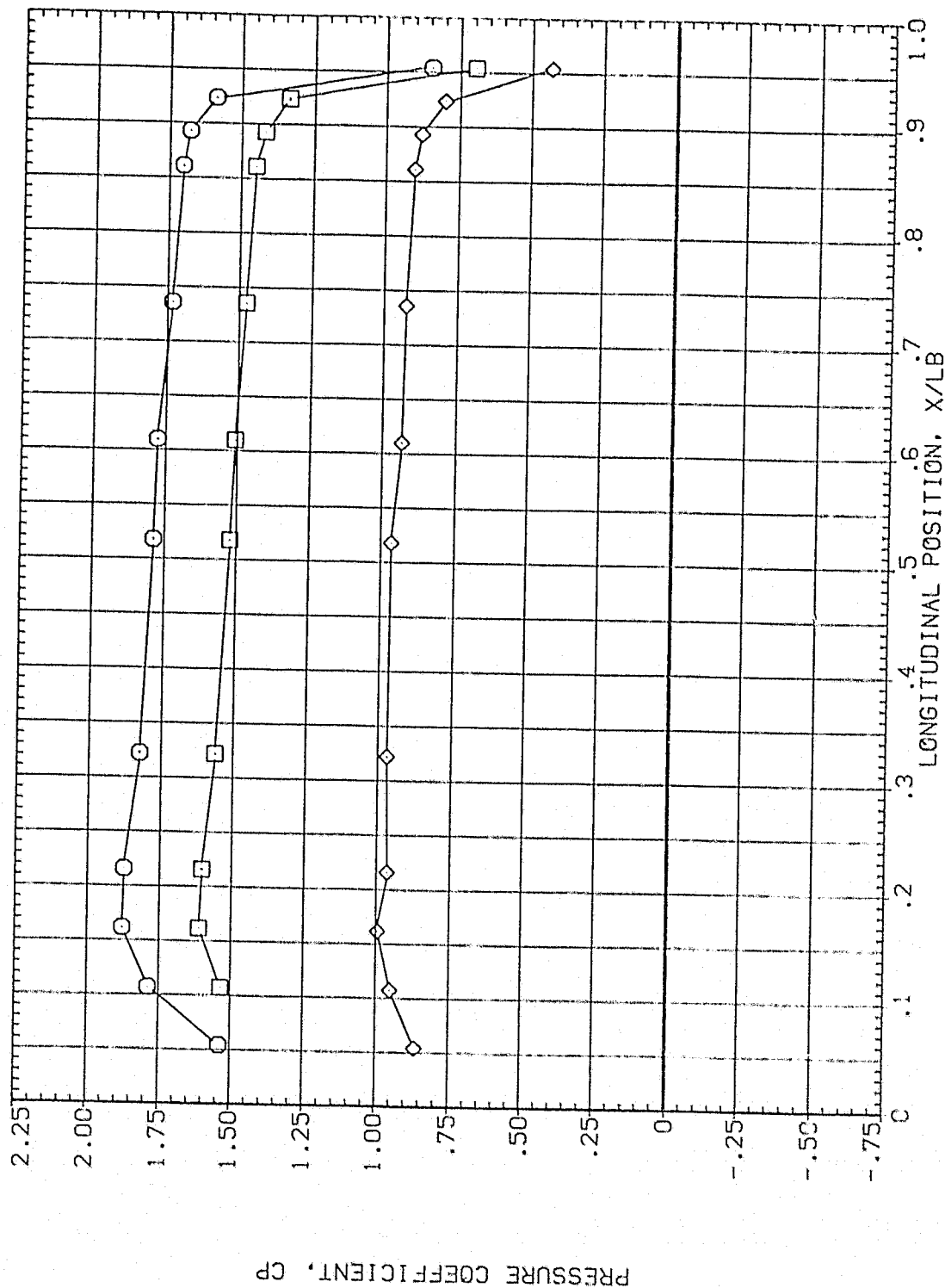


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	247.500	81.830	4.960	2.000	PHI	.000
□	270.000					
◇	292.500					

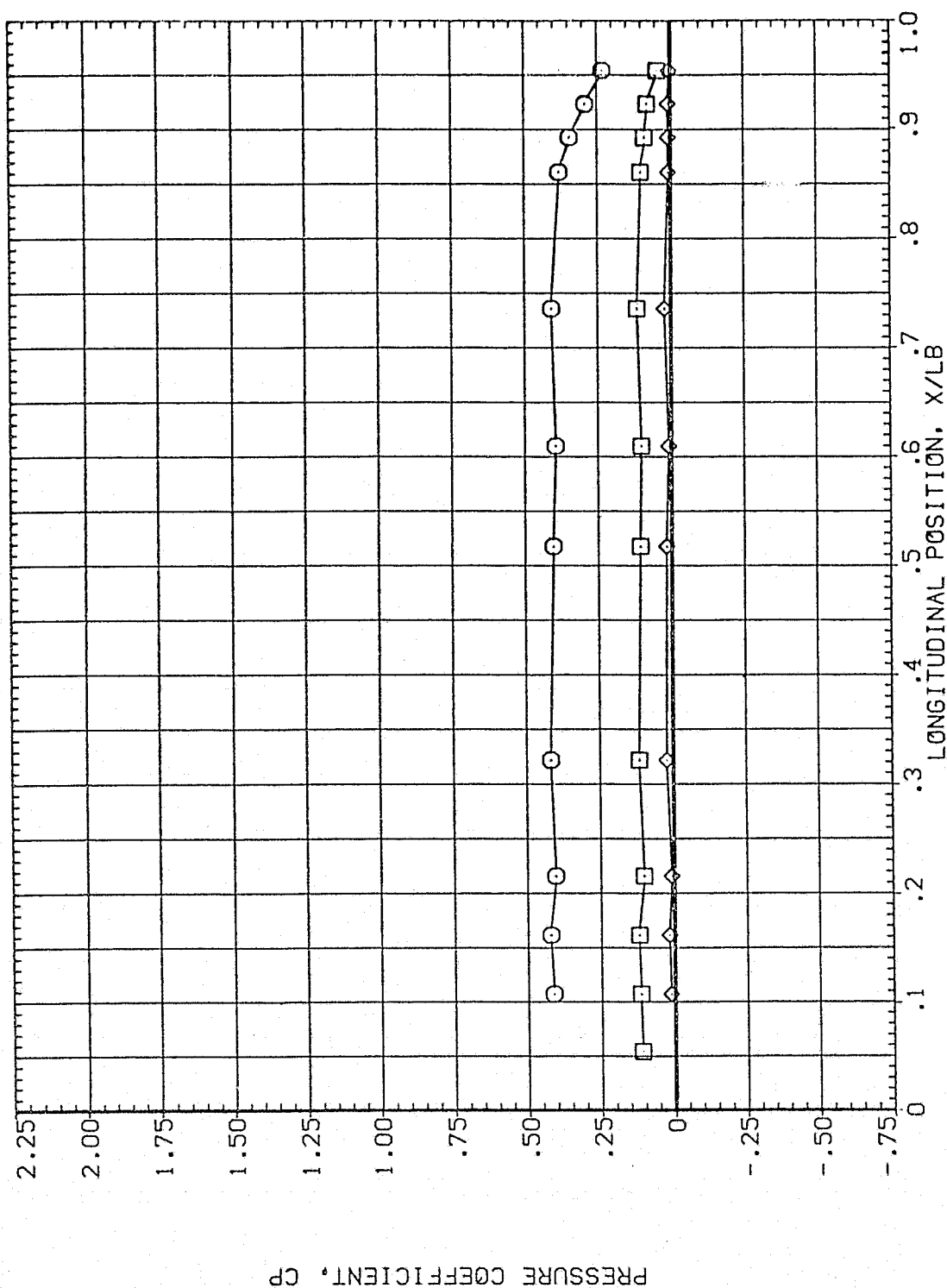


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	315.000	81.830	4.960	BETA	.000	OFFSET	90.000	PHI	.000	.000
○	326.000			MOUNT	2.000					
◇	346.000									

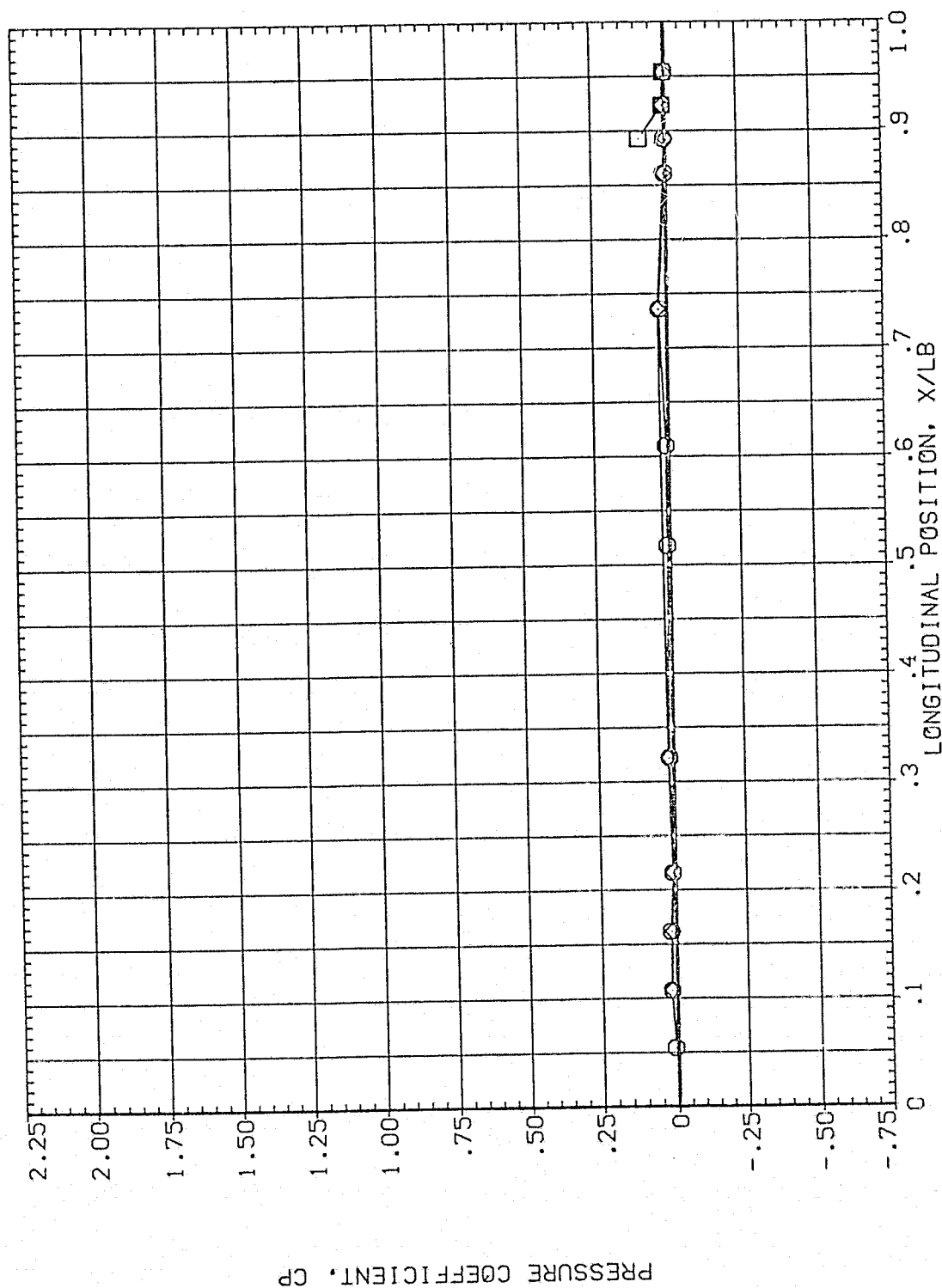


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA074)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	.000	14.000	84.830	84.830	4.960	4.960	BETA	.000	OFFSET	90.000
□	14.000						HOUNT	2.000	PHI	.000
◇	24.000									

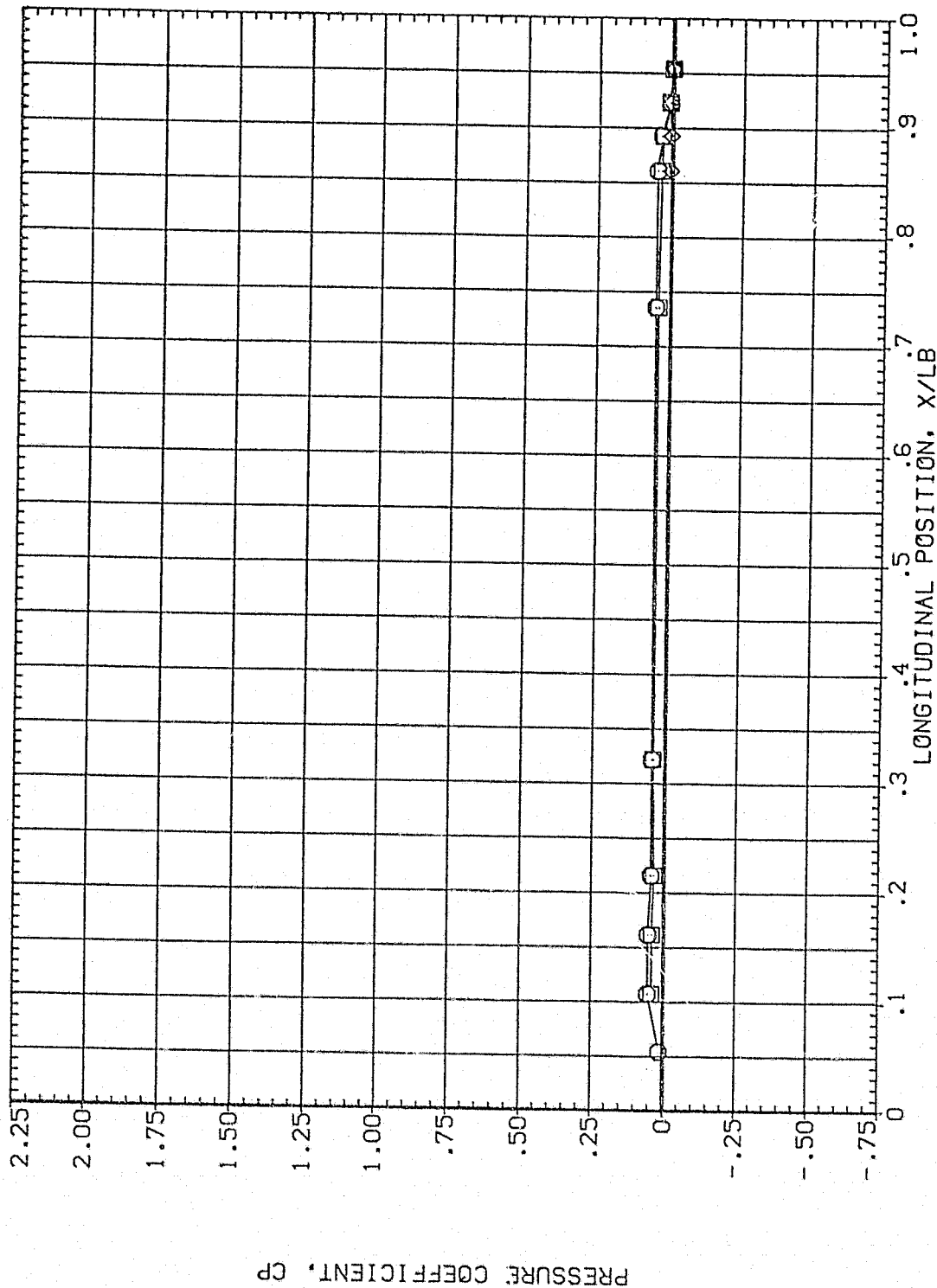


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL THETA ALPHA MACH
 O 45.000 84.830 4.960
 □ 67.500
 ◇ 90.000

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

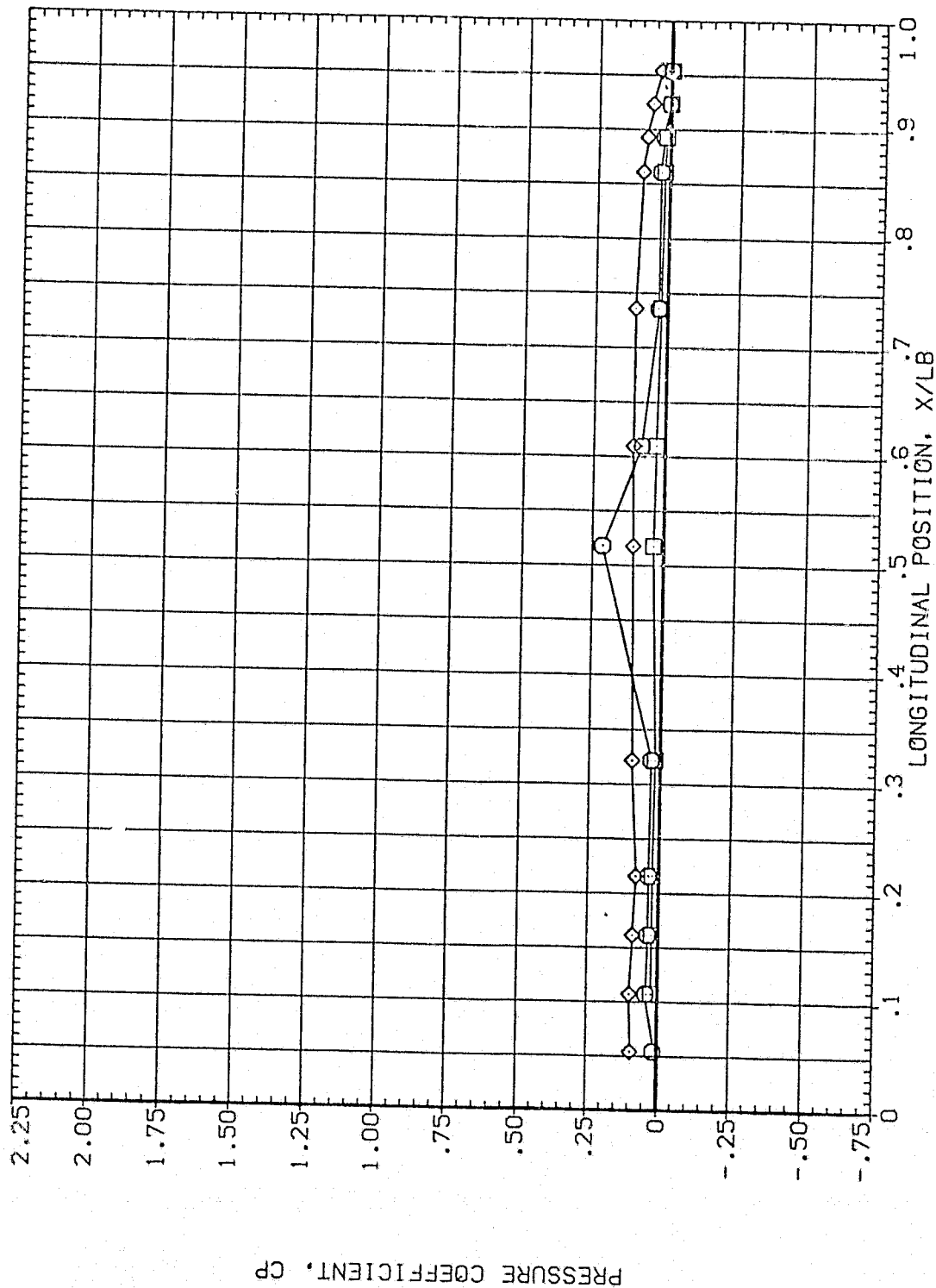


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 593 (1A-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	112.500	82.930	4.960	MGUNT	.000 OFFSET
□	135.000				2.000 PHI
◇	157.500				90.000

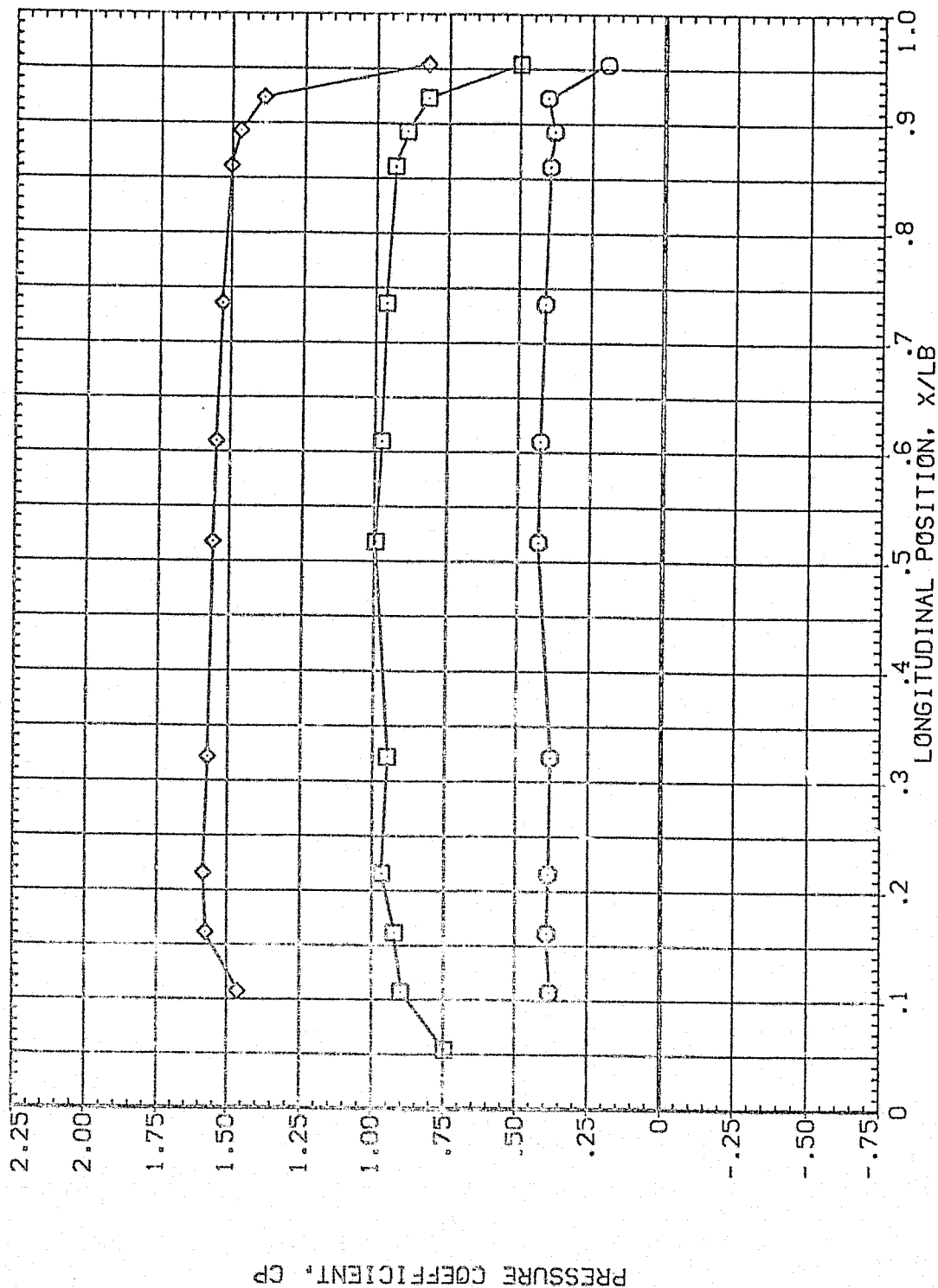


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	180.000	84.830	4.960	HEIGHT	.000 OFFSET
□	202.500				2.000 PHI
◇	225.000				.000

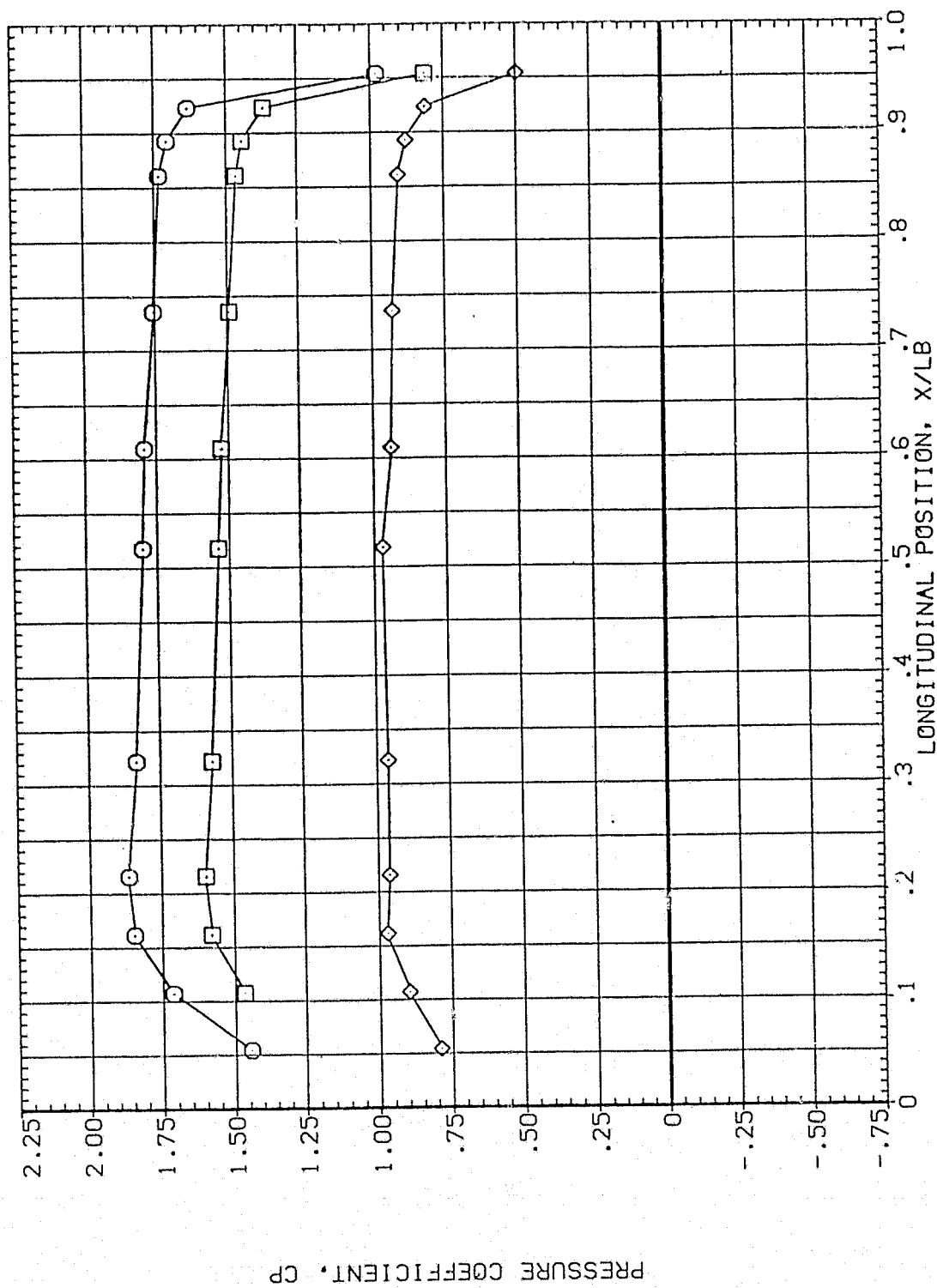


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL

THETA
247.500
270.000
292.500

ALPHA
84.830

MACH
4.960

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000

OFFSET
PHI
90.000
.000

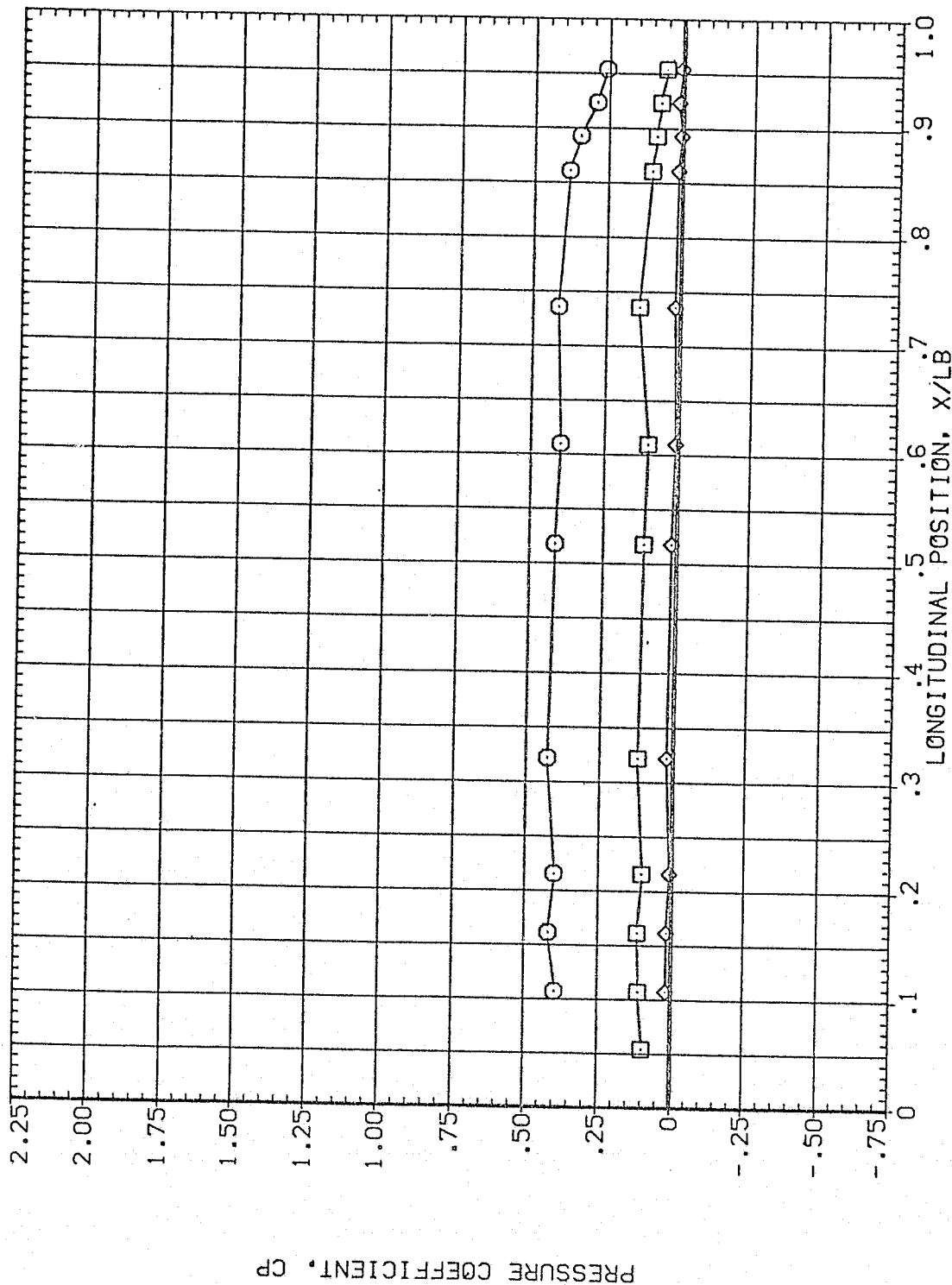


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL THETA ALPHA MACH
 ○ 315.000 84.830 4.960
 □ 326.000
 ◇ 346.000

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

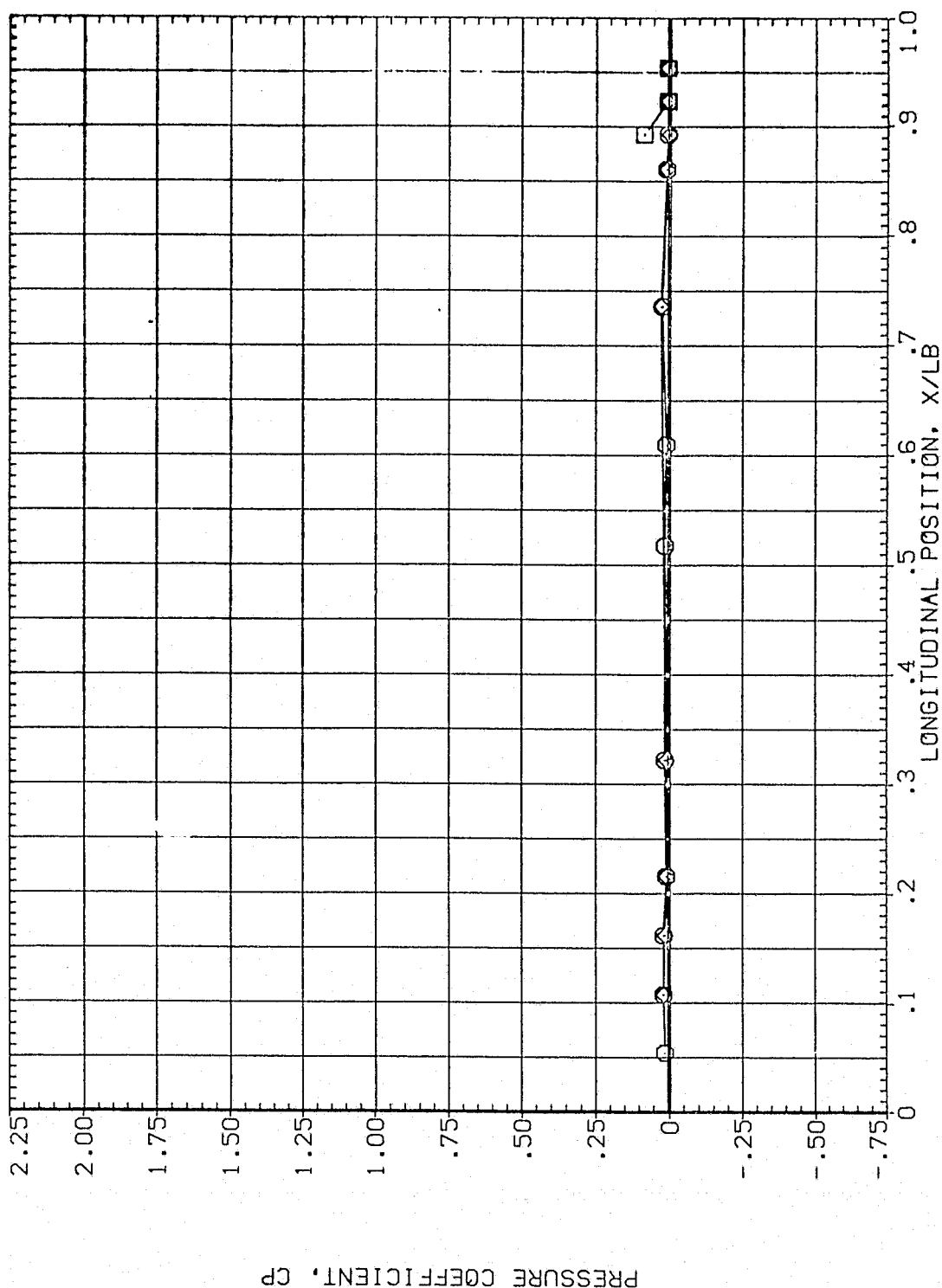


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	THETA	ALPHA	HACH	BETA	PARAMETRIC VALUES
○	.000	87.830	4.960	MOUNT	.000 OFFSET
□	14.000				2.000 PHI
◇	24.000				90.000

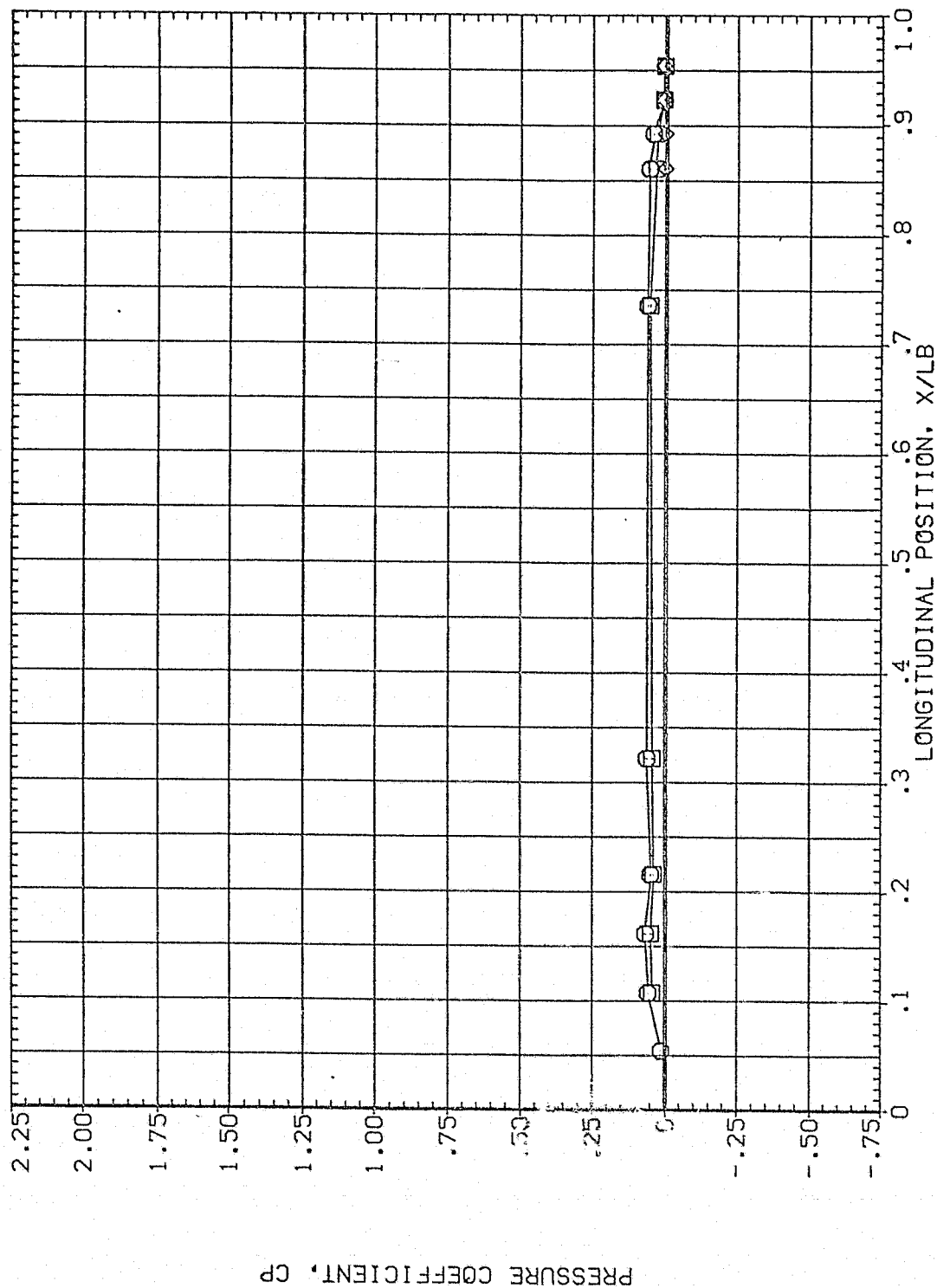


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
◇	45.000	87.830	4.960	MOUNT	.000
□	67.500			PHI	2.000
◇	90.000				.000

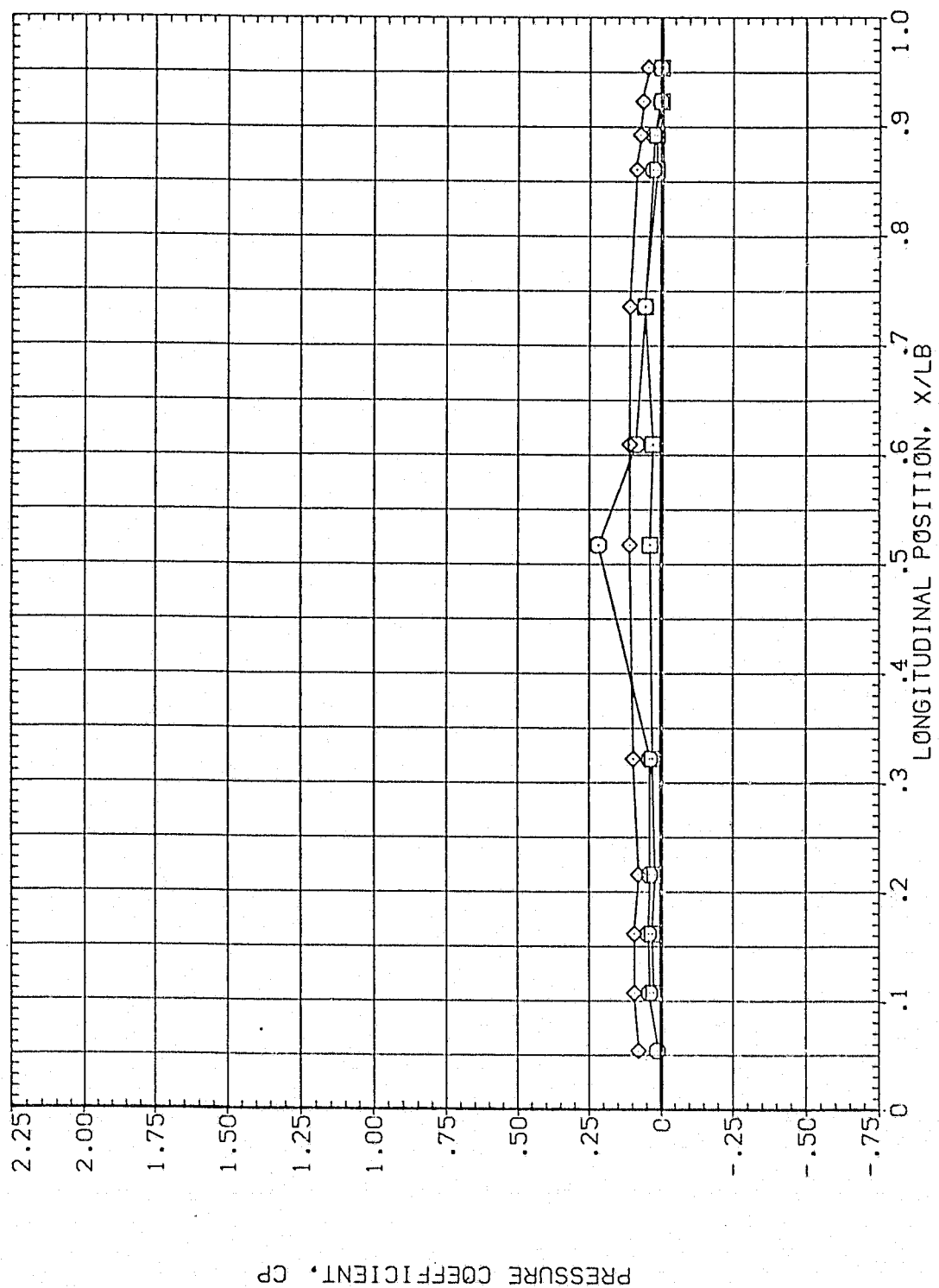


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL

THETA
112.500
135.000
157.500

ALPHA
87.830

MACH
4.960

BETA
MOUNT

PARAMETRIC VALUES
.000 OFFSET
2.000 PHI
90.000
.000

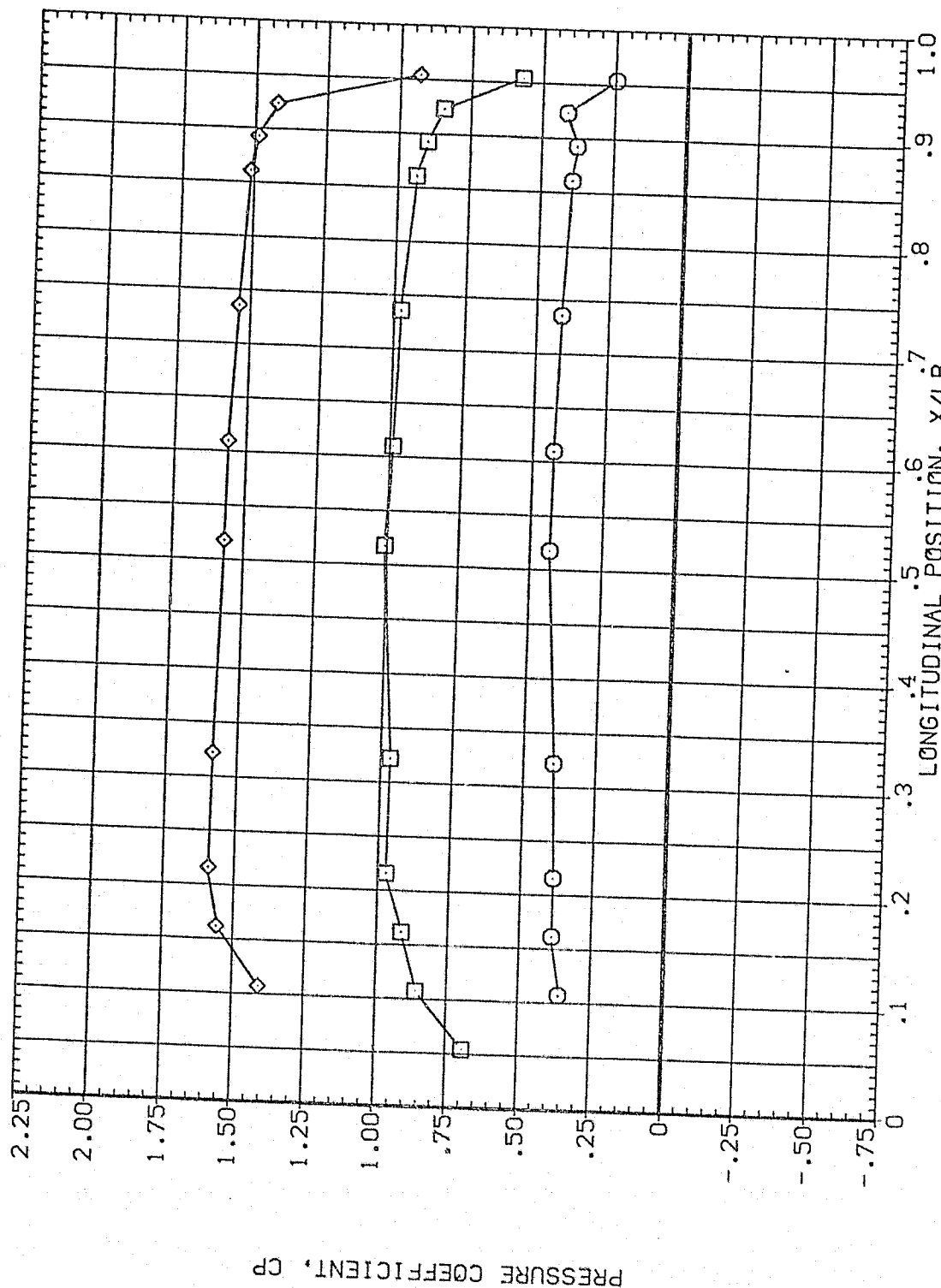


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

THETA	ALPHA	MACH	PARAMETRIC VALUES		
180.000	87.830	4.960	BETA	OFFSET	90.000
202.500			MOUNT	PHI	.000
225.000					

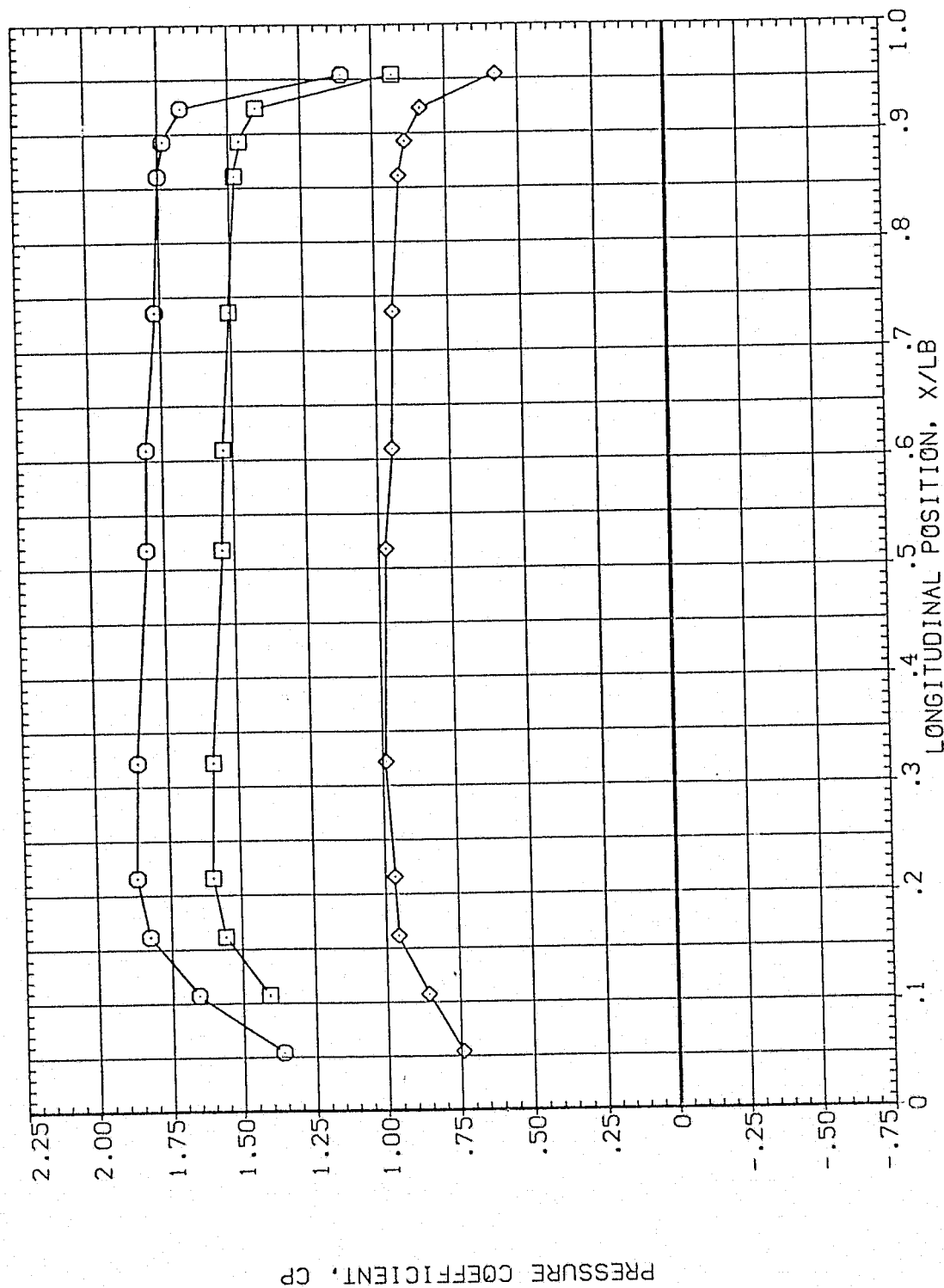


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA075)

SYMBOL	THETA		ALPHA	MACH	PARAMETRIC VALUES		
	247.500	270.000	87.830	4.960	BETA	.000	90.000
○	292.500				MDUNT	2.000	PHI
□							
◇							

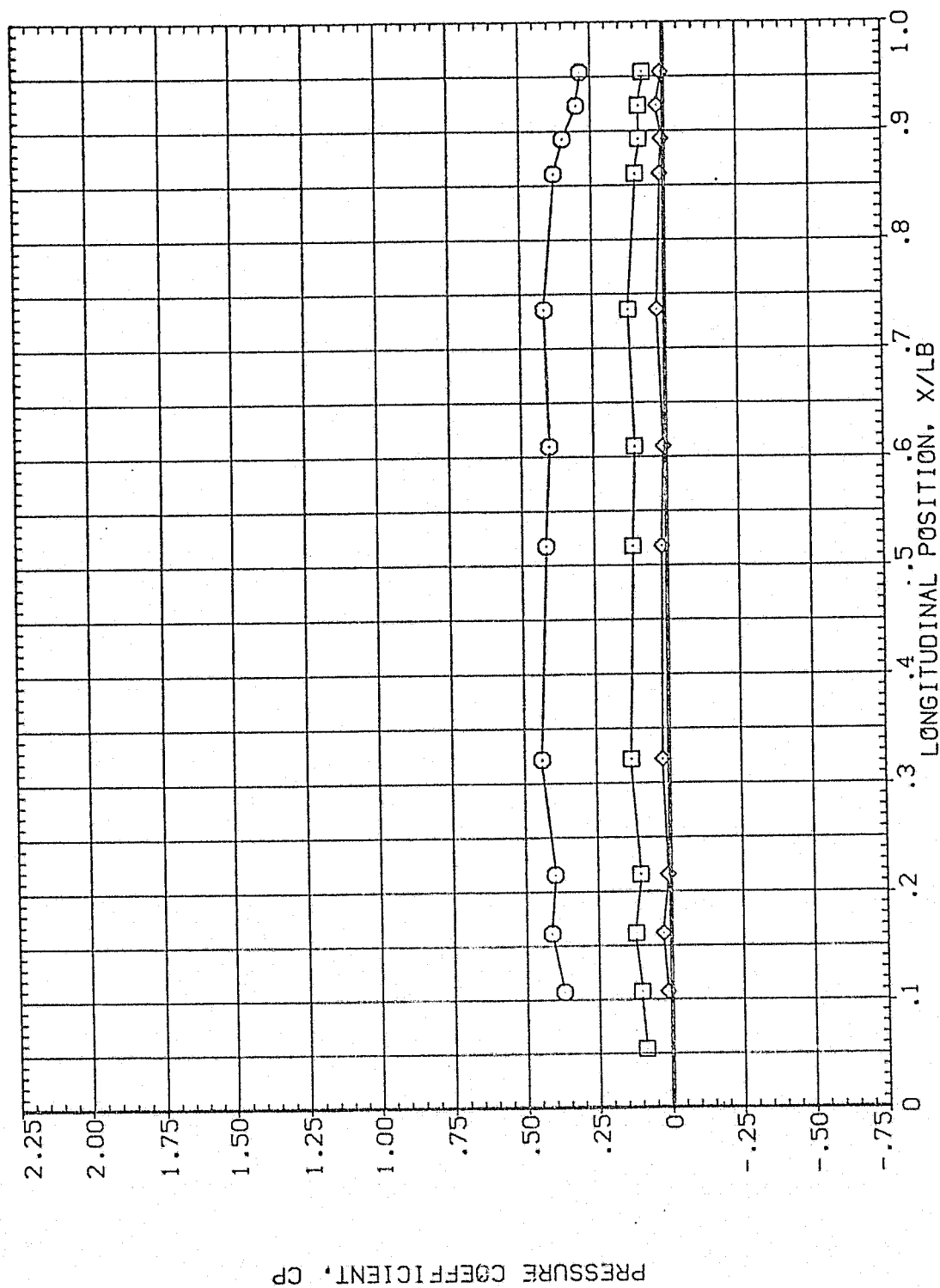


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
 ○
 □
 ◇

THETA
 315.000
 326.000
 346.000

ALPHA
 87.830

MACH
 4.960

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000

90.000
 .000

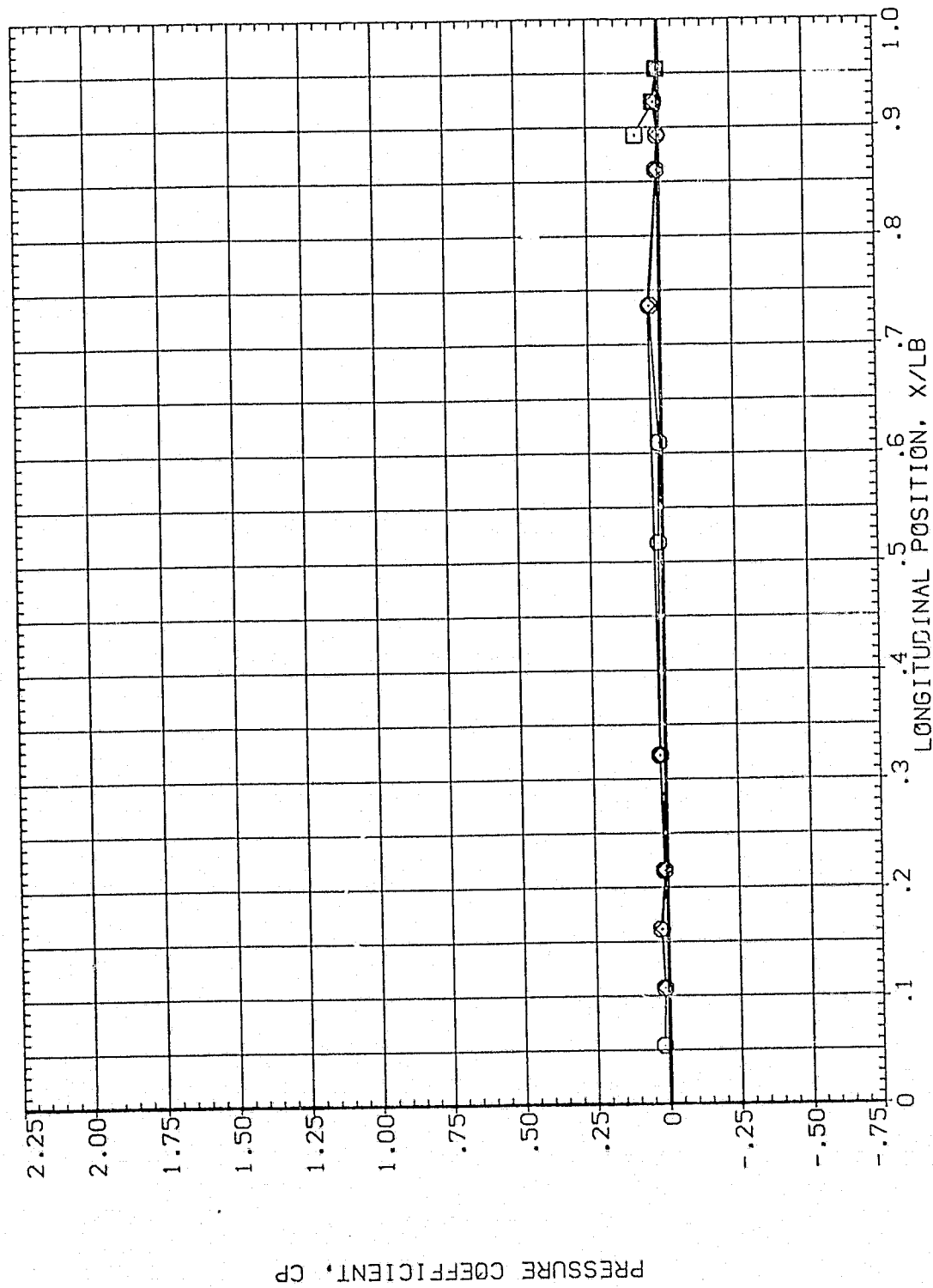


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL
 ○
 □
 ◇

THETA
 .000
 14.000
 24.000

ALPHA
 89.830

MACH
 4.960

PARAMETRIC VALUES
 .000
 2.000
 .000

BETA
 MOUNT
 .000
 PHI

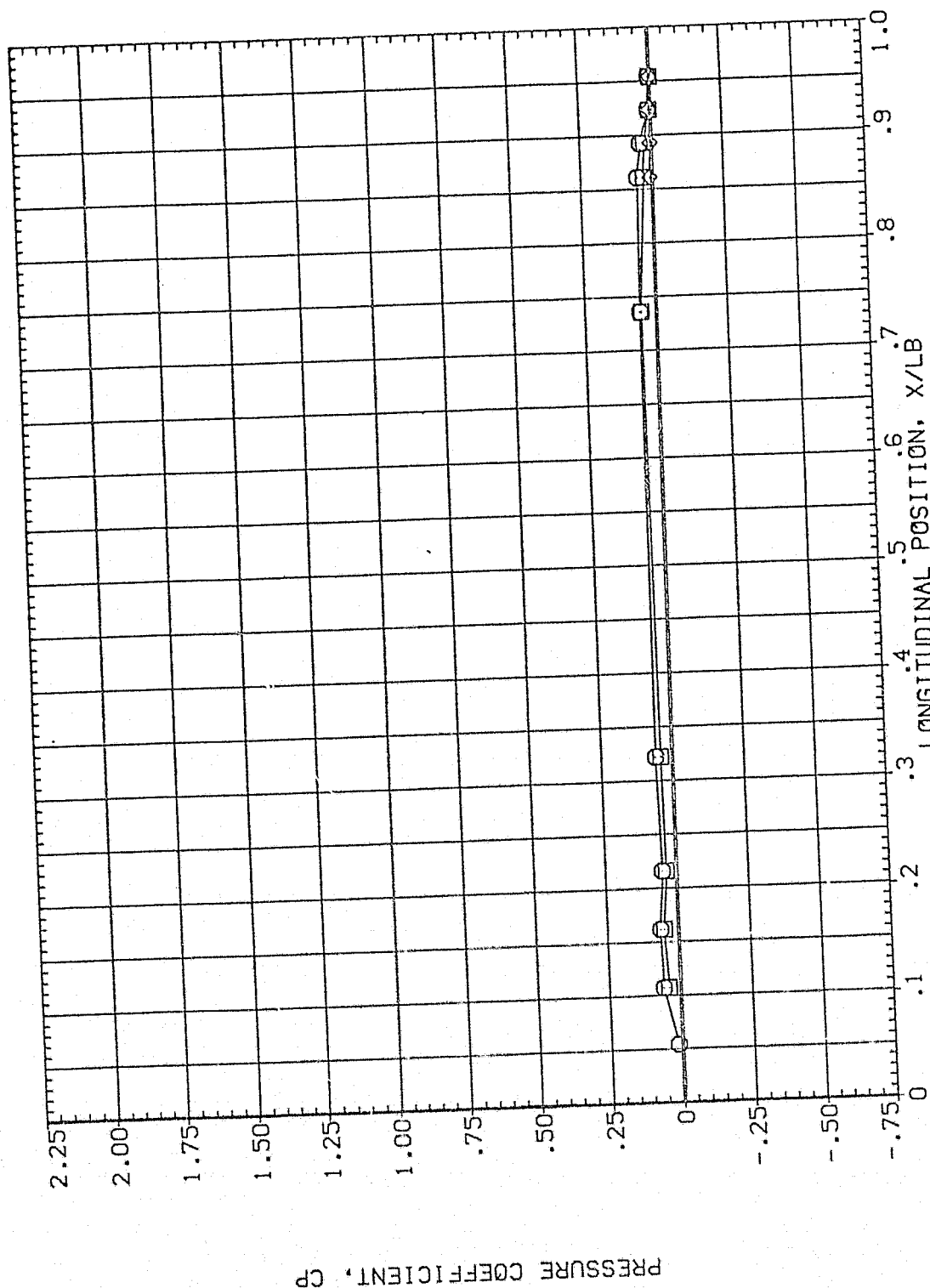


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL THETA ALPHA MACH
 O 45.000 89.830 4.960
 □ 67.500
 ◇ 90.000

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

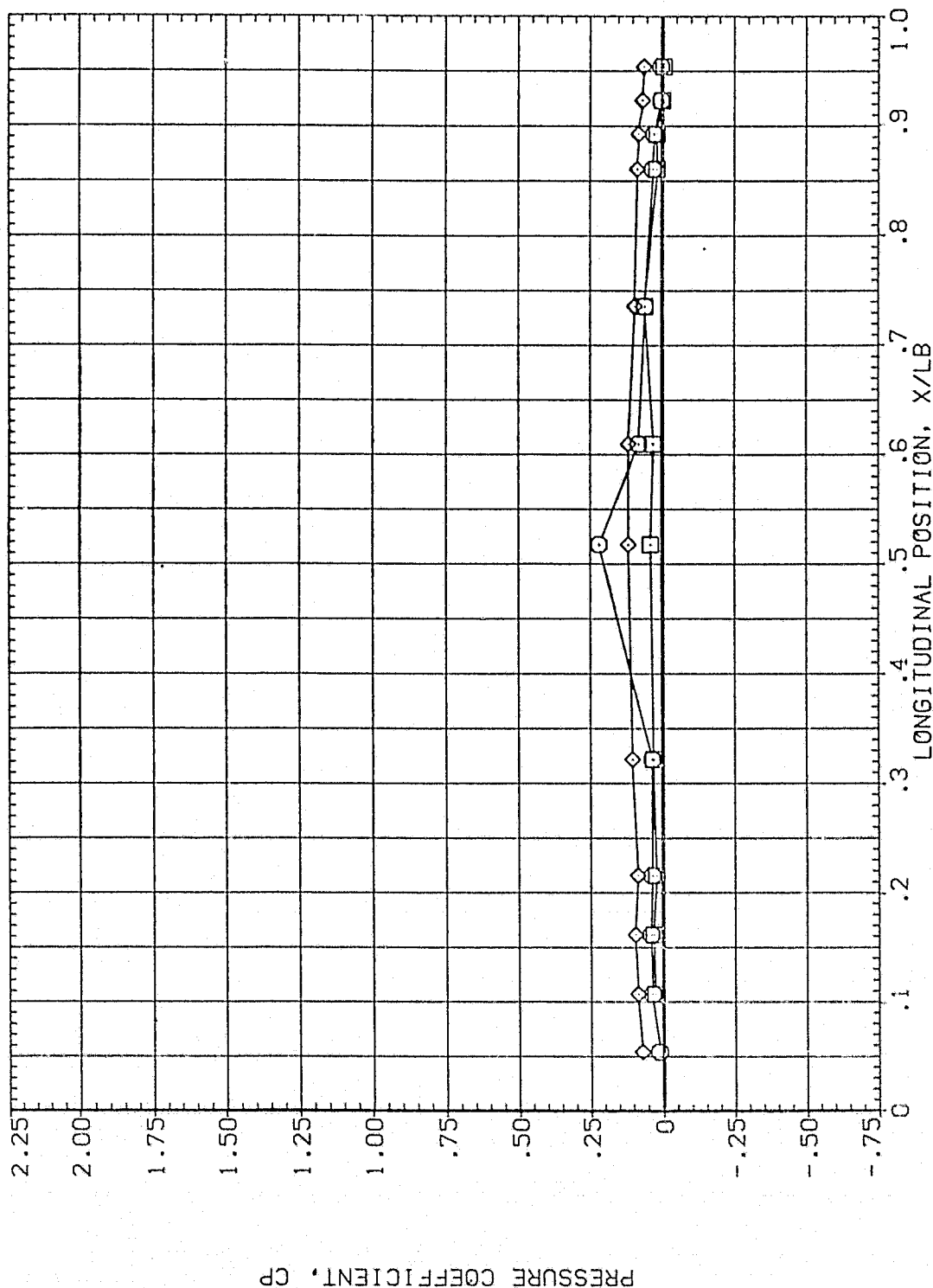


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL
 ○
 □
 ◇

THETA 112.500
 135.000
 157.500
 ALPHA 89.830
 MACH 4.960

PARAMETRIC VALUES
 BETA .000
 HOUNT 2.000
 OFFSET PHI 90.000
 .000

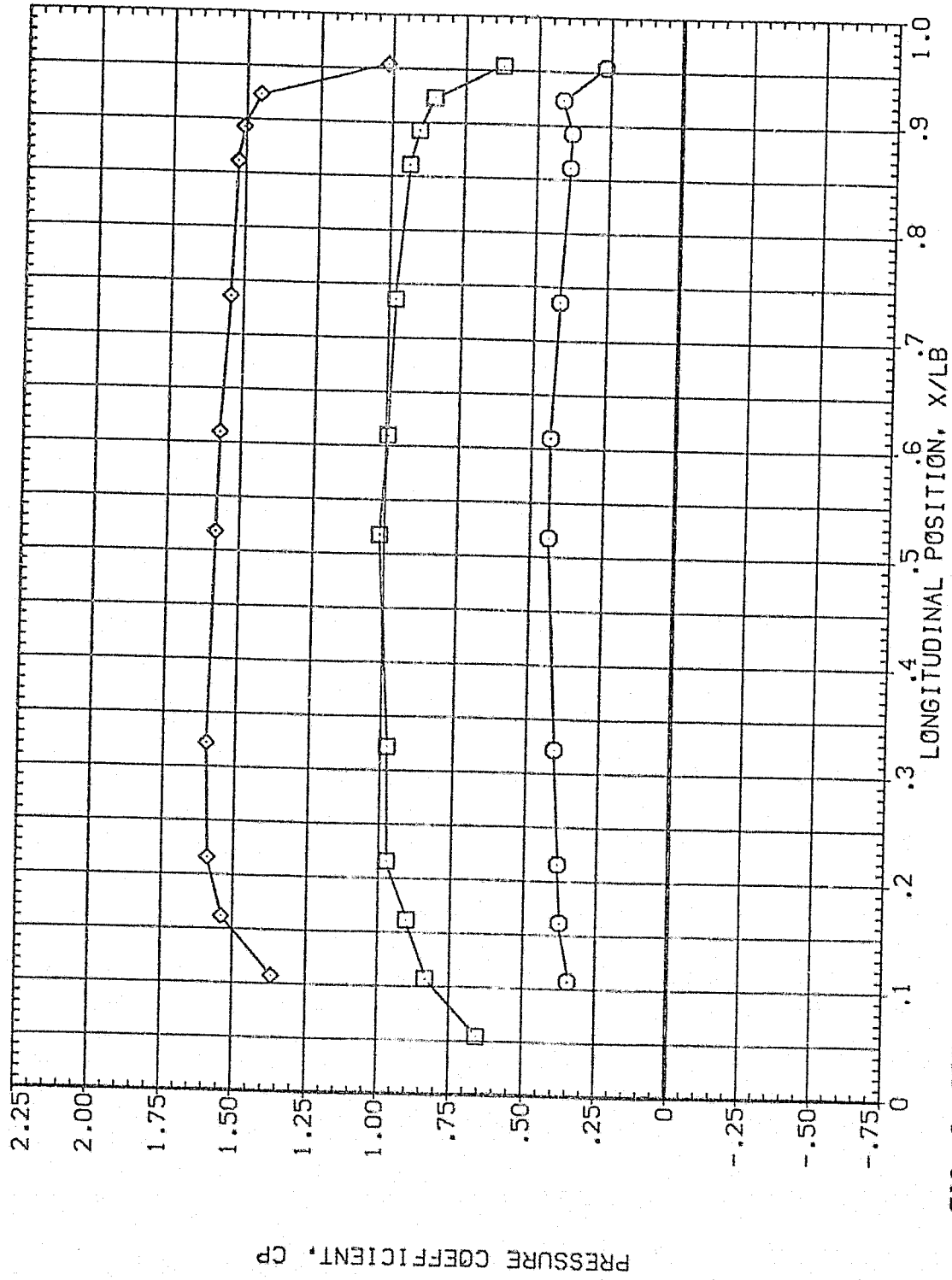


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	180.000	89.830	4.960	2.000	.000	.000
□	202.500					
◇	225.000					

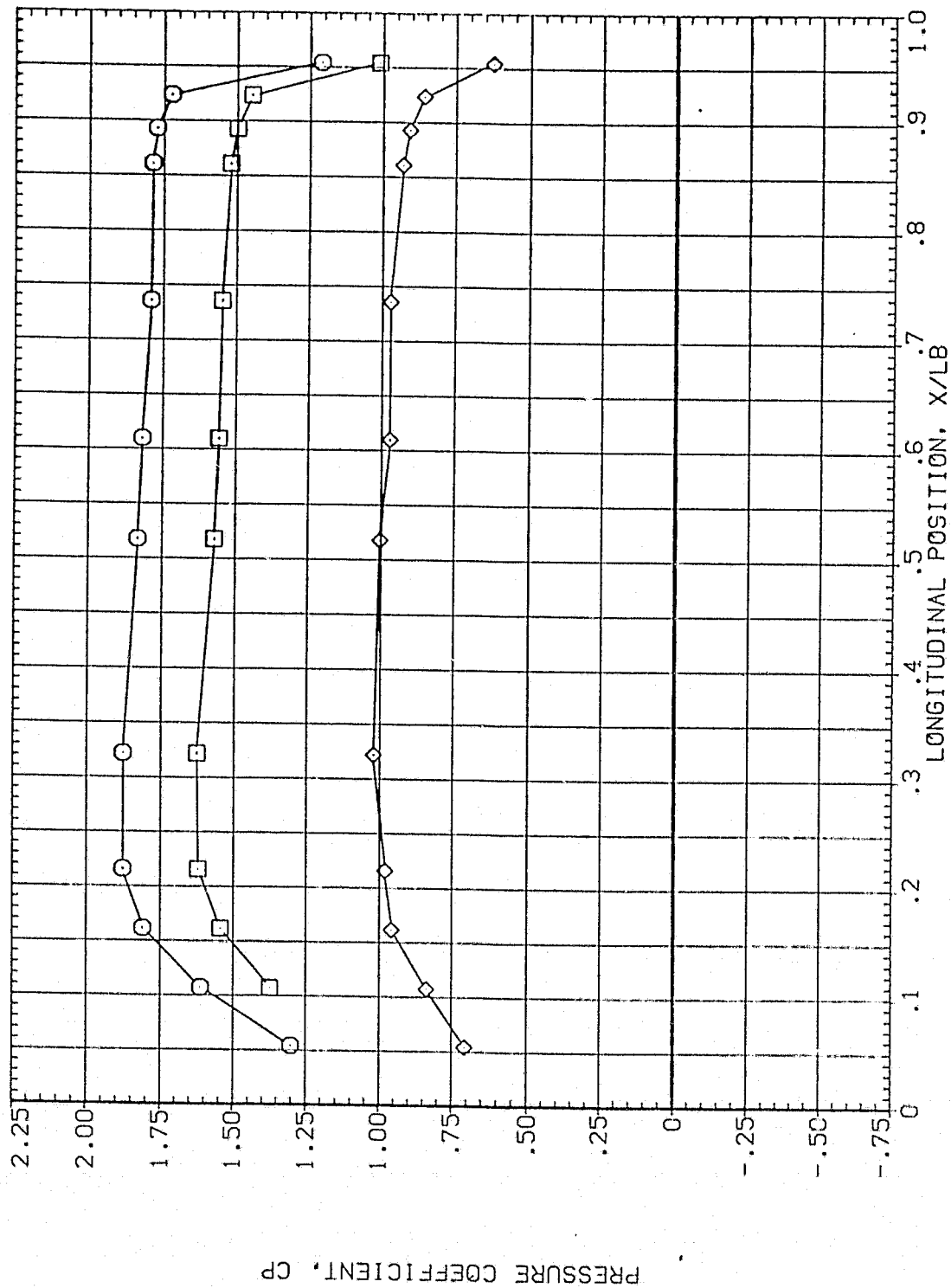


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 536 (TA-2F) MCR0200 EXTERNAL TANK, T2

SWITCH

BETA

ALPHA

MACH

247.500

83.830

4.960

270.000

292.500

(P1A076)

PARAMETRIC VALUES

.000

2.000

PHI

BETA

MOUNT

90.000

.000

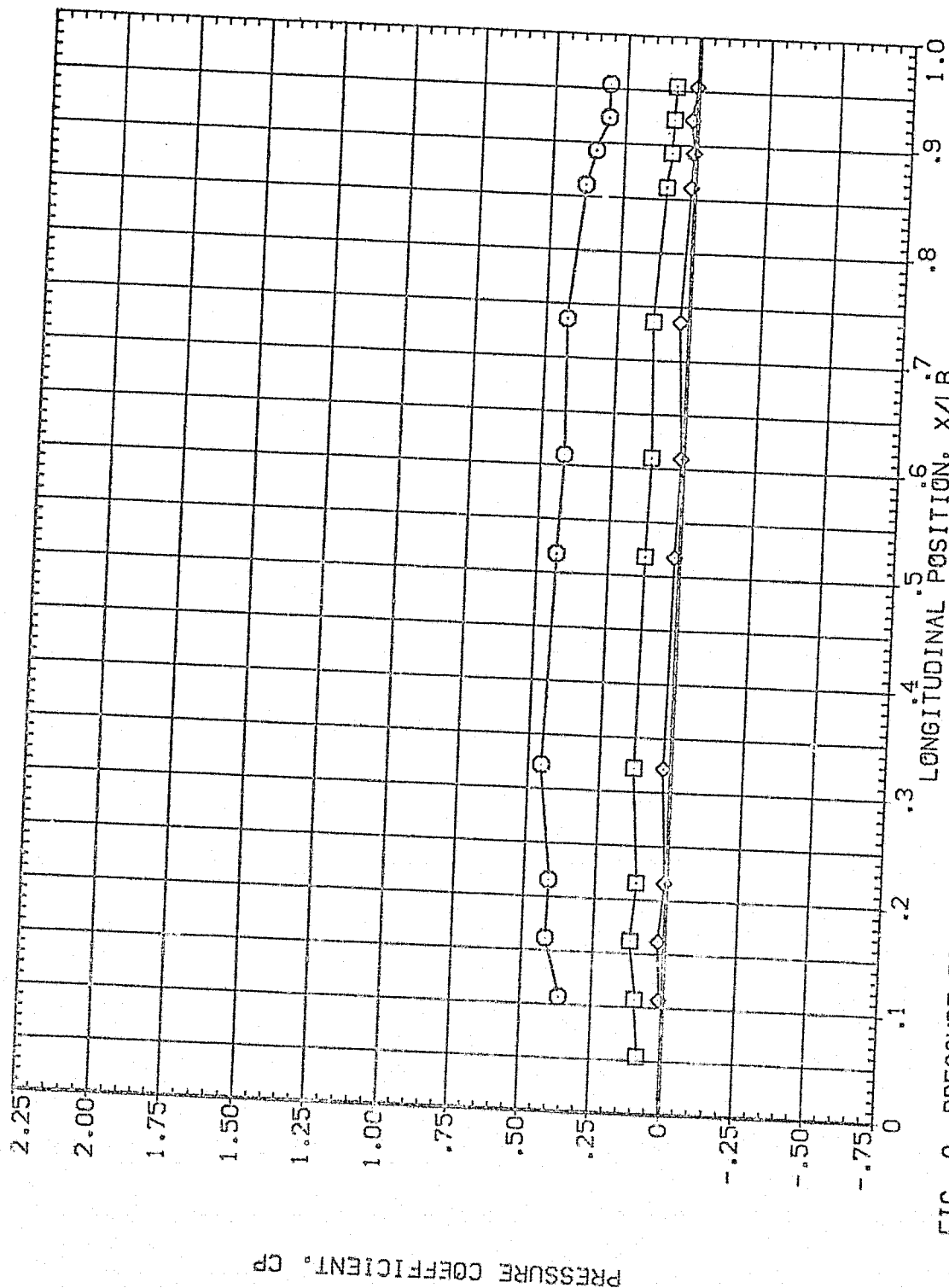


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL
 ○
 □
 ◇

THETA
 315.000
 326.000
 346.000

ALPHA
 89.830

MACH
 4.950

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 .000
 .000
 PHI

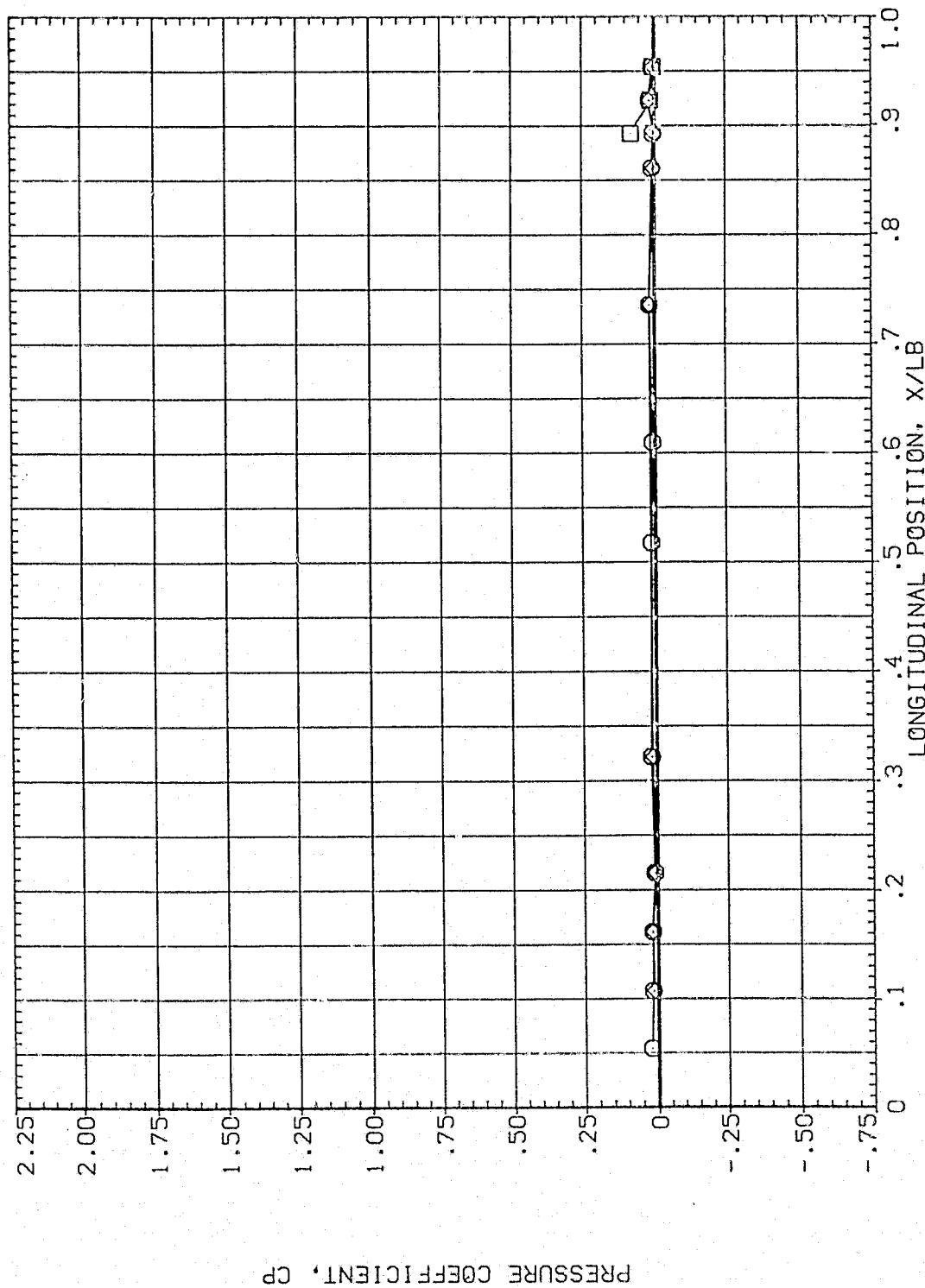


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL	THETA		ALPHA		MACH		BETA		PARAMETRIC VALUES	
	.000	14.000	91.850	91.850	4.960	4.960	MOUNT	.000	OFFSET	PHI
□										
◇										

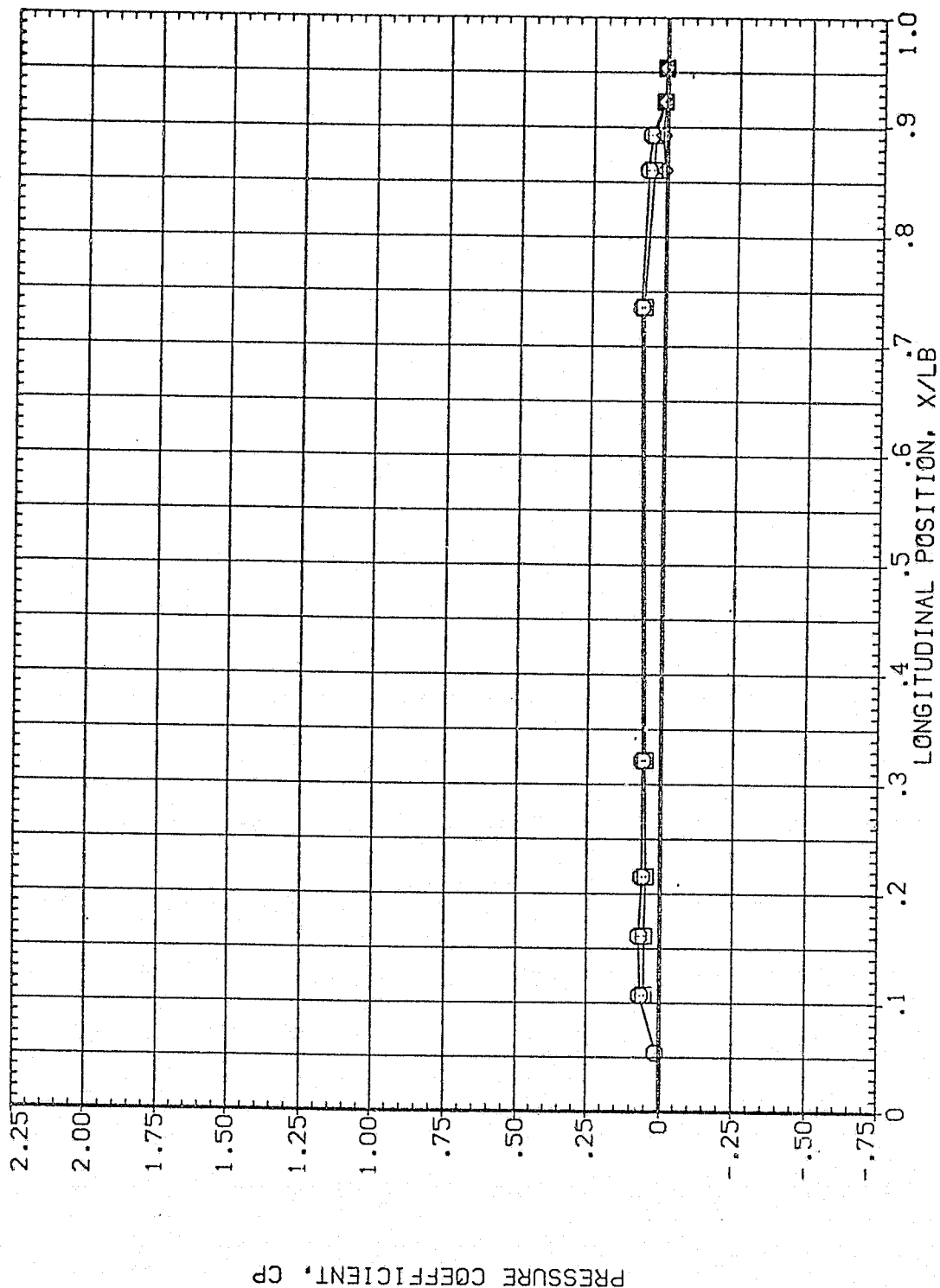


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	45.000	91.850	4.960	0.000	OFFSET
□	67.500			2.000	PHI
◇	90.000				

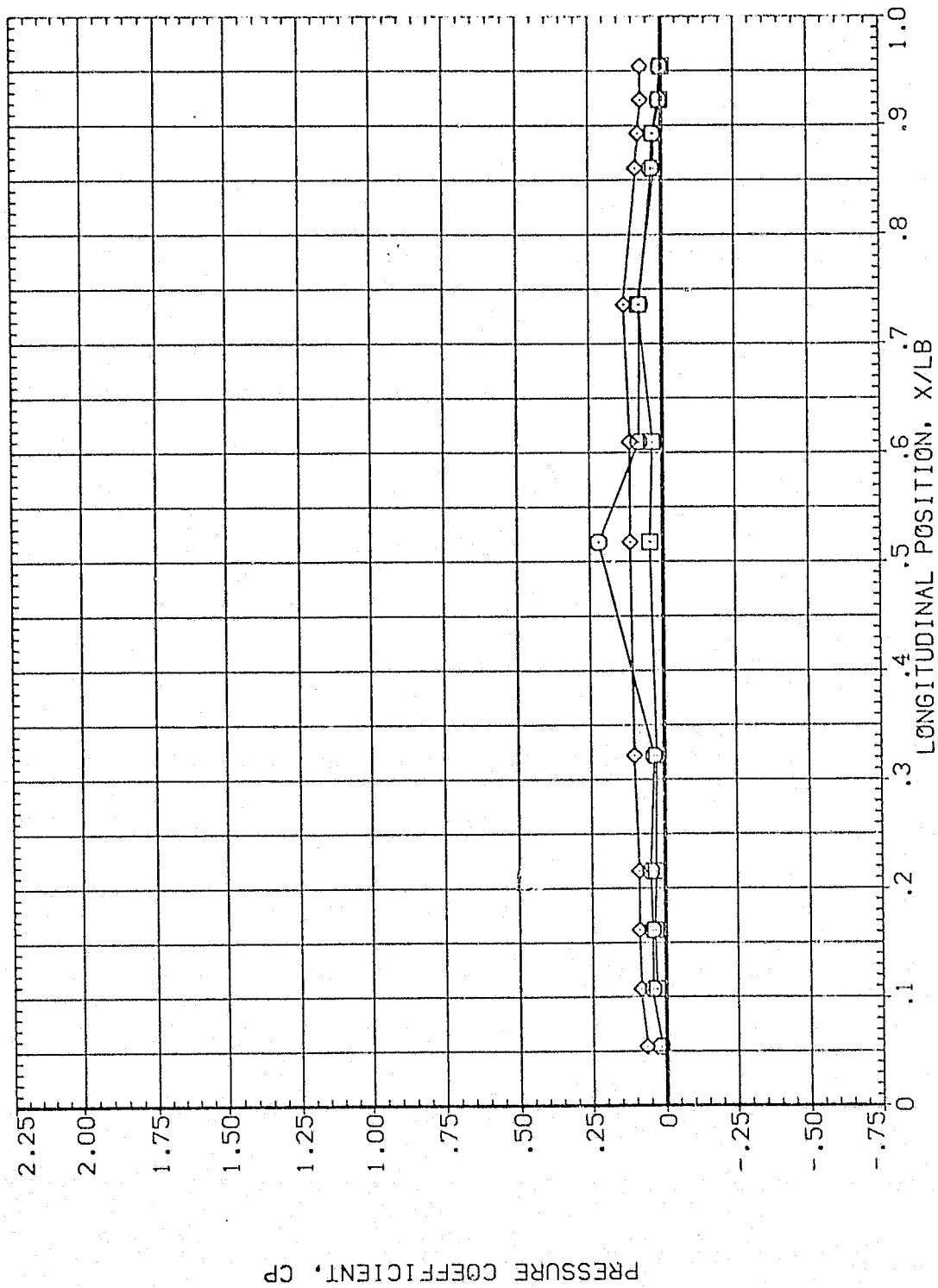


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES			
				BETA	OFFSET	PHI	
○	112.500	91.850	4.960	MOUNT	.000		90.000
□	135.000				2.000		.000
◇	157.500						

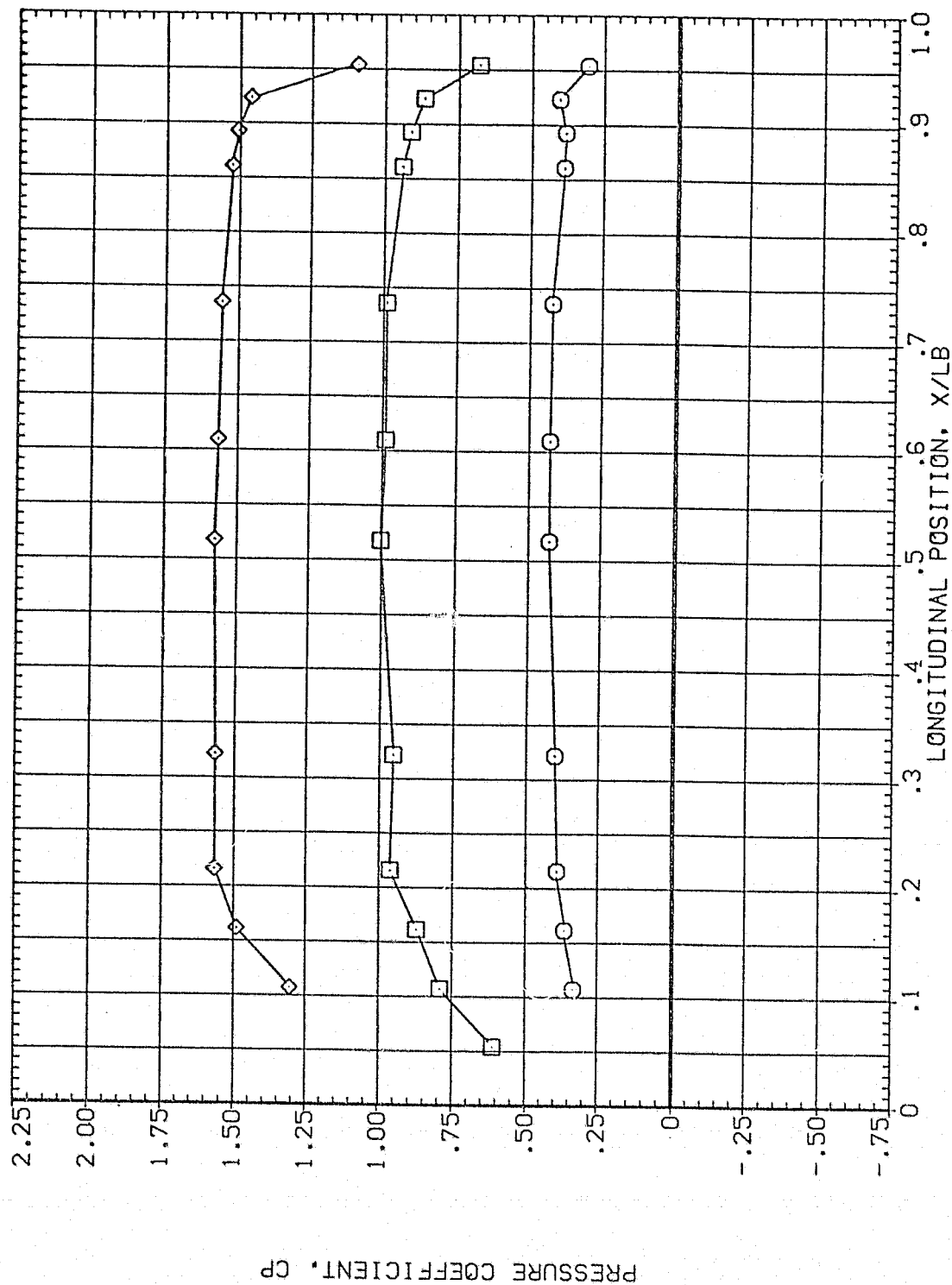


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A077)

SYMBOL

THETA
180.000
202.500
225.000

ALPHA
91.850
MACH
4.960

PARAMETRIC VALUES

BETA
MOUNT
90.000
2.000
OFFSET
PHI
.000

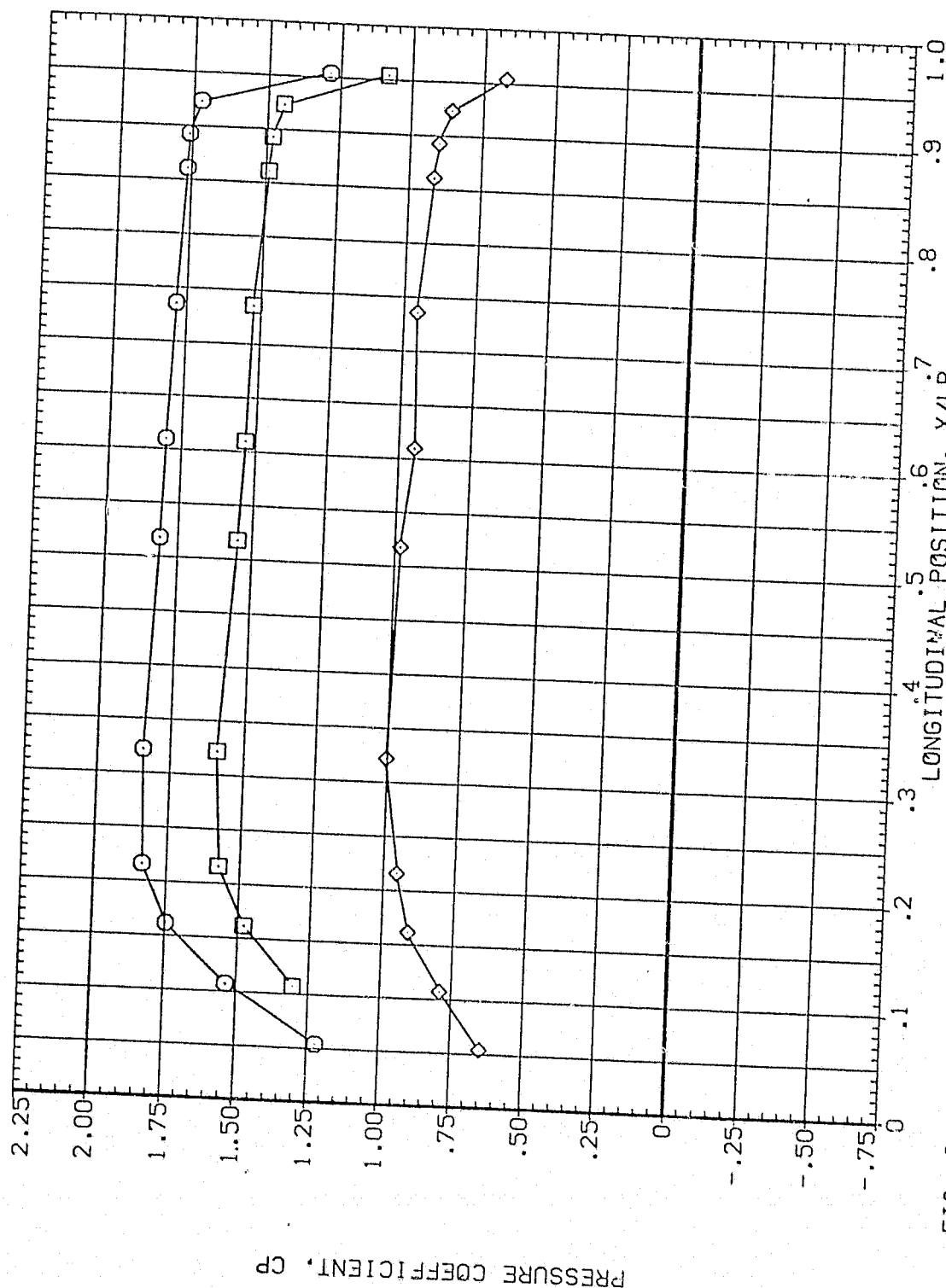


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A077)

SYMBOL

THETA
247.500
270.000
292.500

ALPHA
91.850

MACH
4.960

BETA
MOUNT

PARAMETRIC VALUES
.000 2.000

OFFSET
PHI

90.000
.000

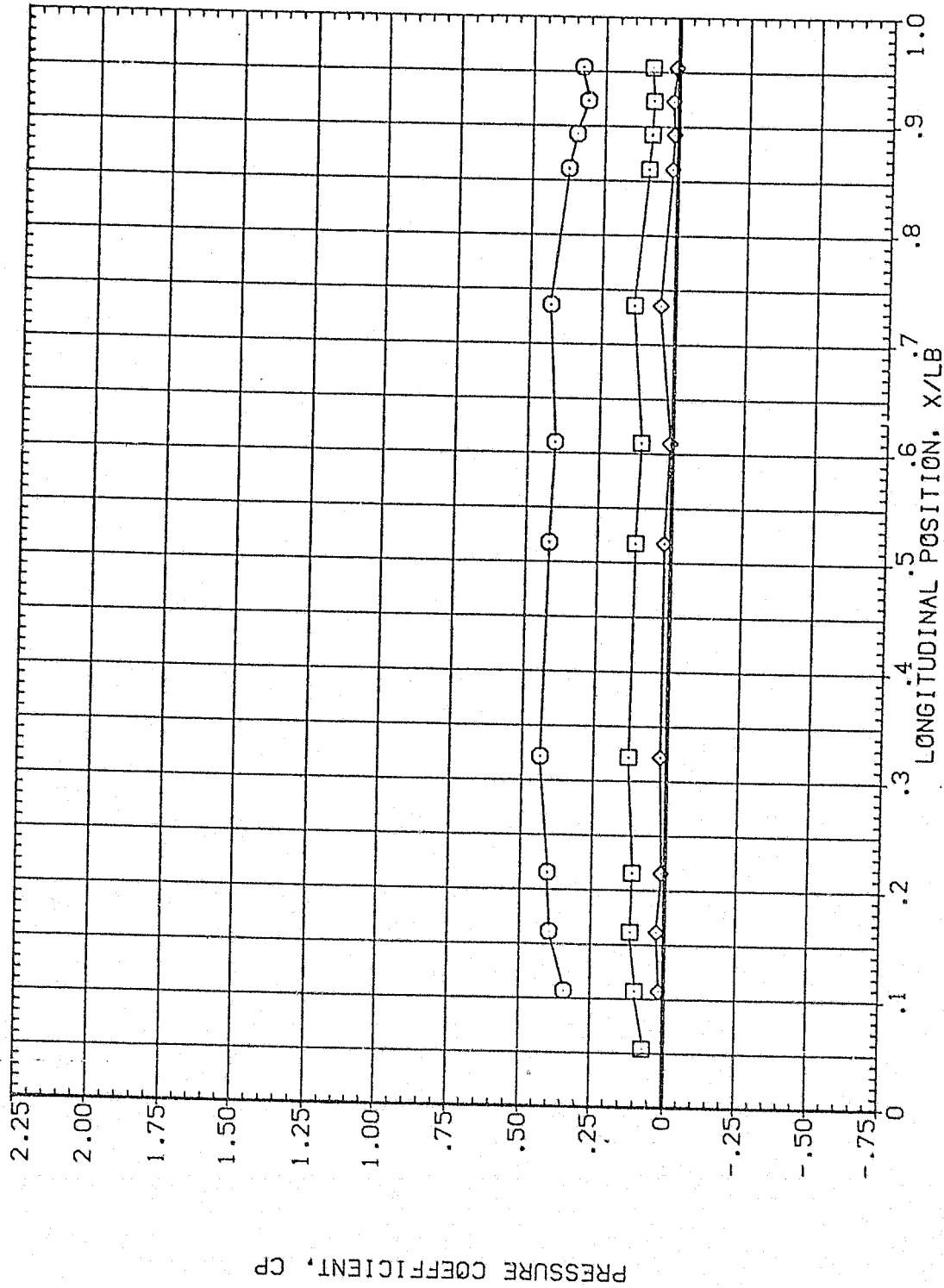


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
◇	315.000	91.850	4.960	MOUNT	.000 OFFSEY
□	326.000				2.000 PH1
◇	346.000				90.000 .000

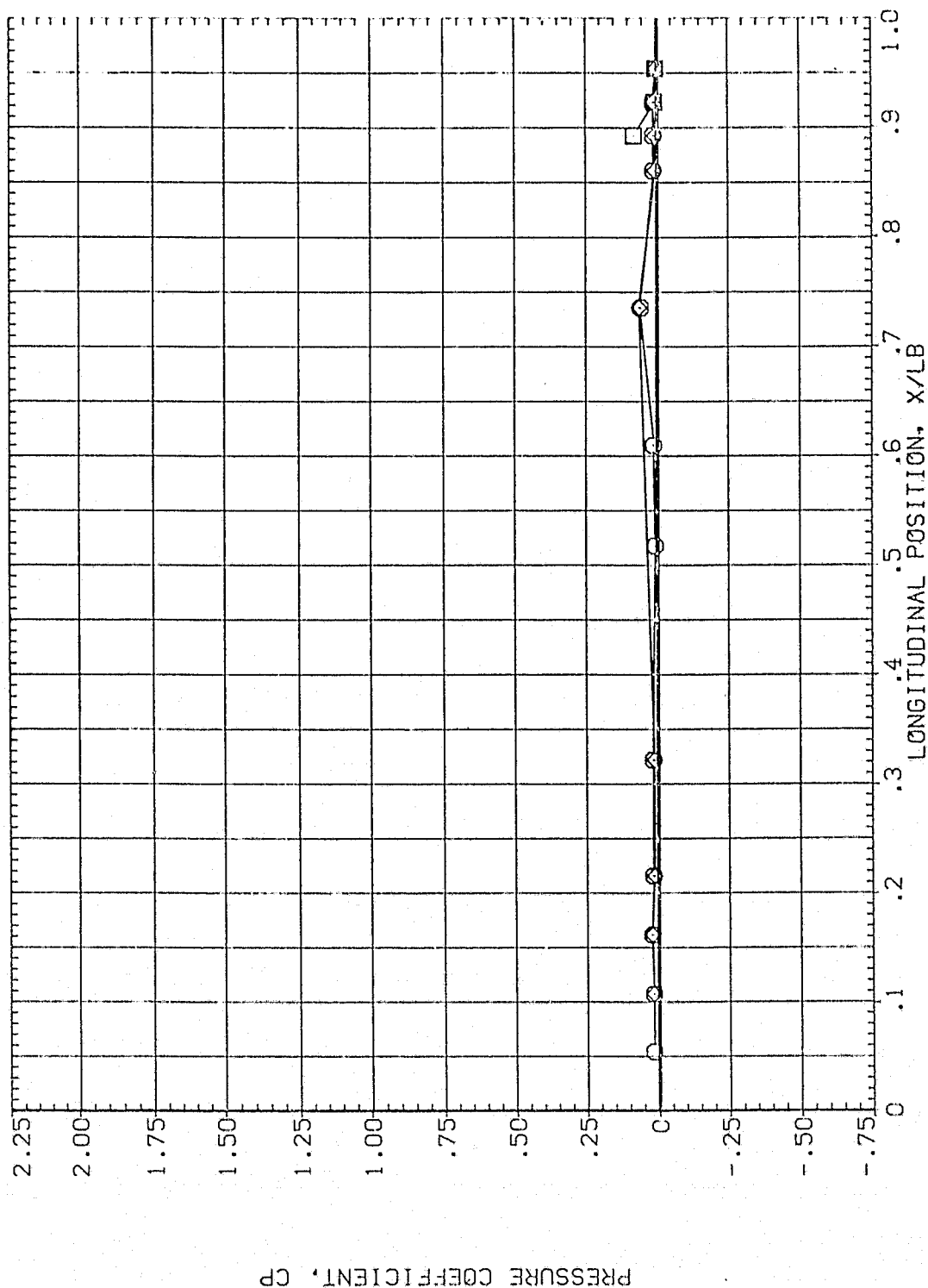


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.000	94.850	4.960	MOUNT	.000	90.000
□	14.000				2.000	
◇	24.000					.000

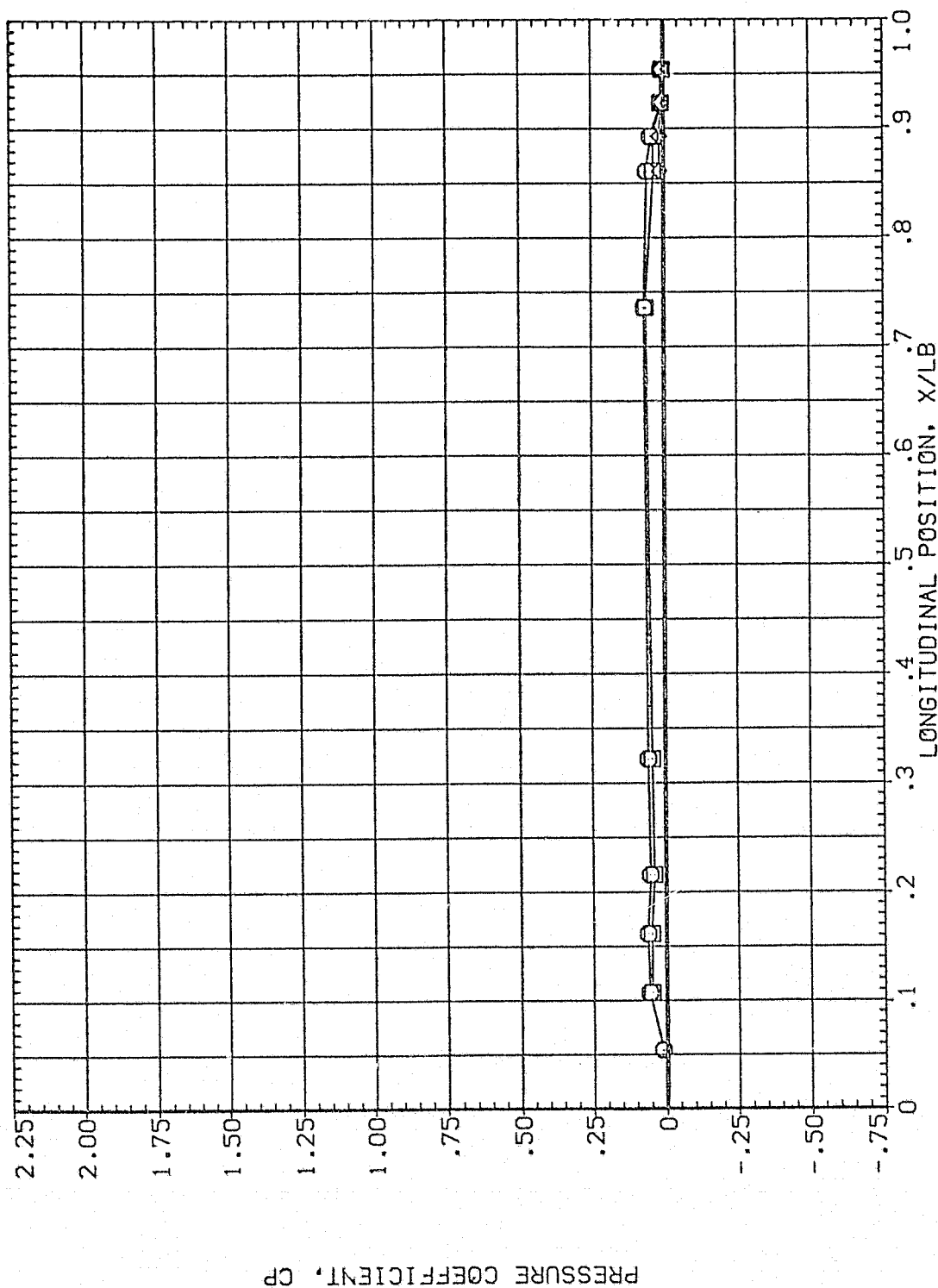


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

(P1A078)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

PARAMETRIC VALUES
BETA .000
HOUNT 2.000
OFFSET .000
PHI .000

THETA 45.000
ALPHA 94.850
MACH 4.960
67.500
90.000

SYMBOL
◇
□
○

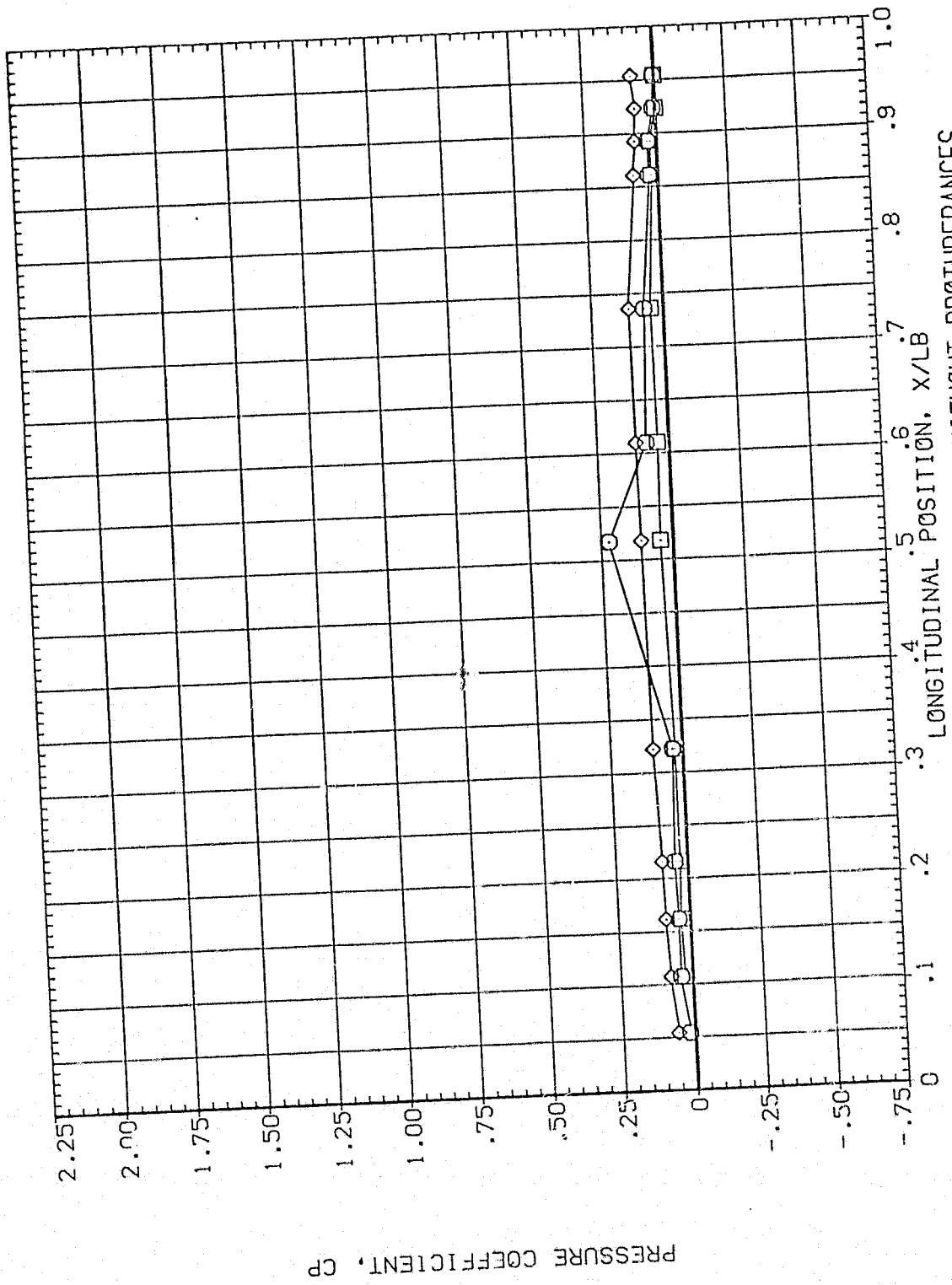


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	THETA		ALPHA	MACH	PARAMETRIC VALUES		
	112.500	135.000			BETA	OFFSET	PHI
○	112.500	135.000	94.850	4.960	HOUNT	.000	.000
□	135.000					2.000	
◇	157.500						

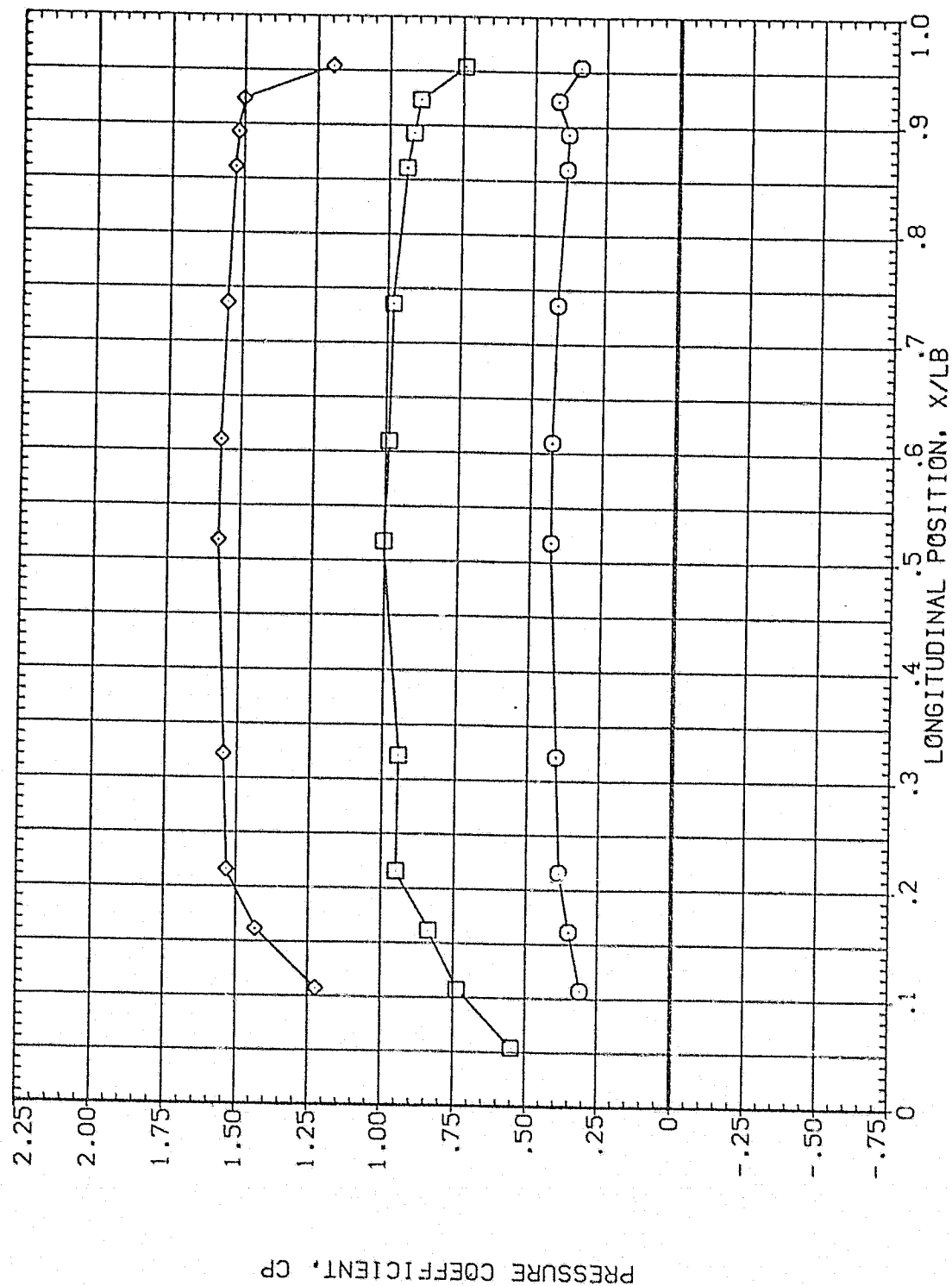


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL THETA ALPHA MACH
 O 180.000 94.250 4.960
 □ 202.500
 ◇ 225.000

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI
 90.000
 .000

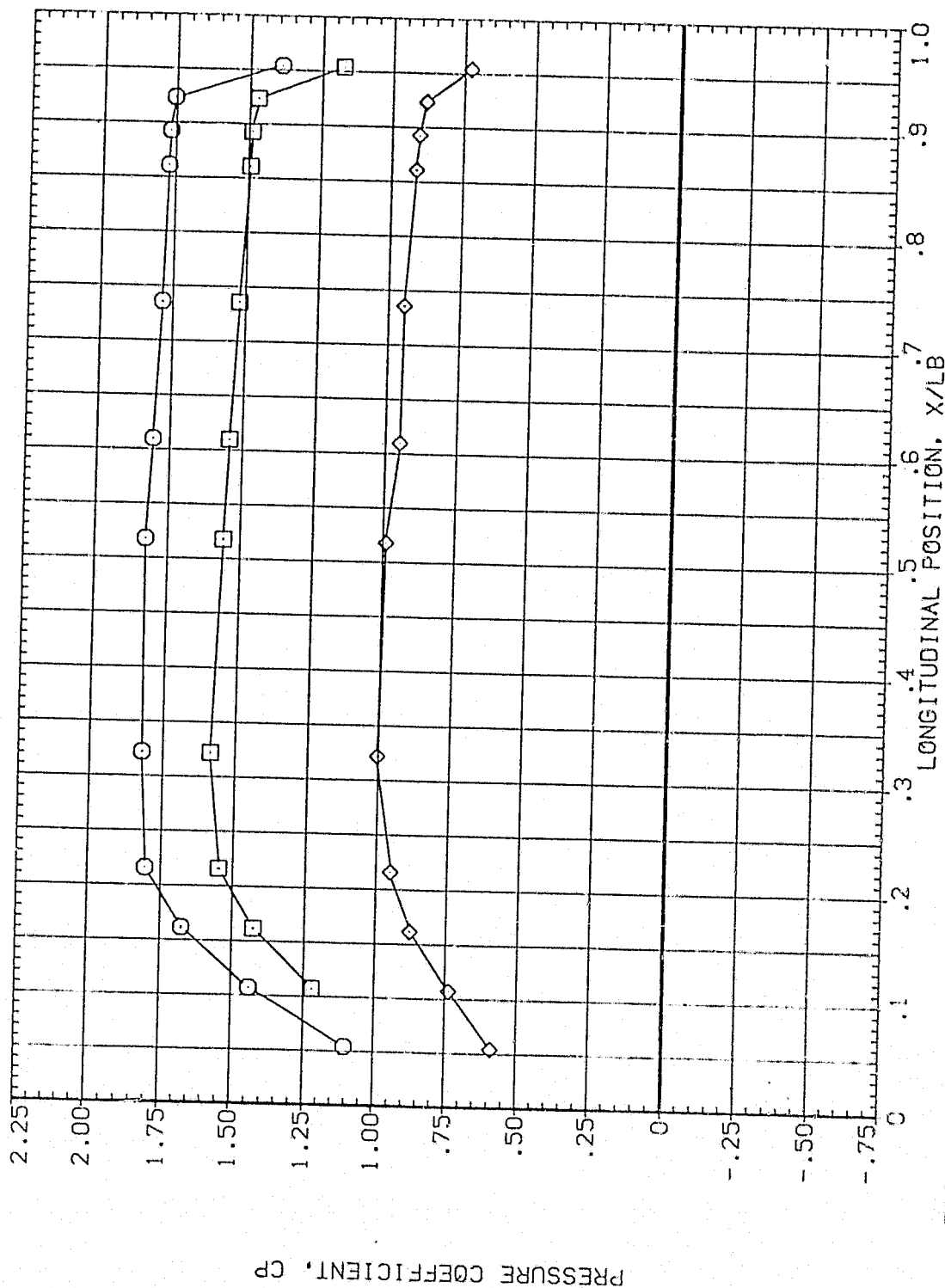


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	247.500	94.850	4.960	MOUNT	PHI	.000
□	270.000					
◇	292.500					

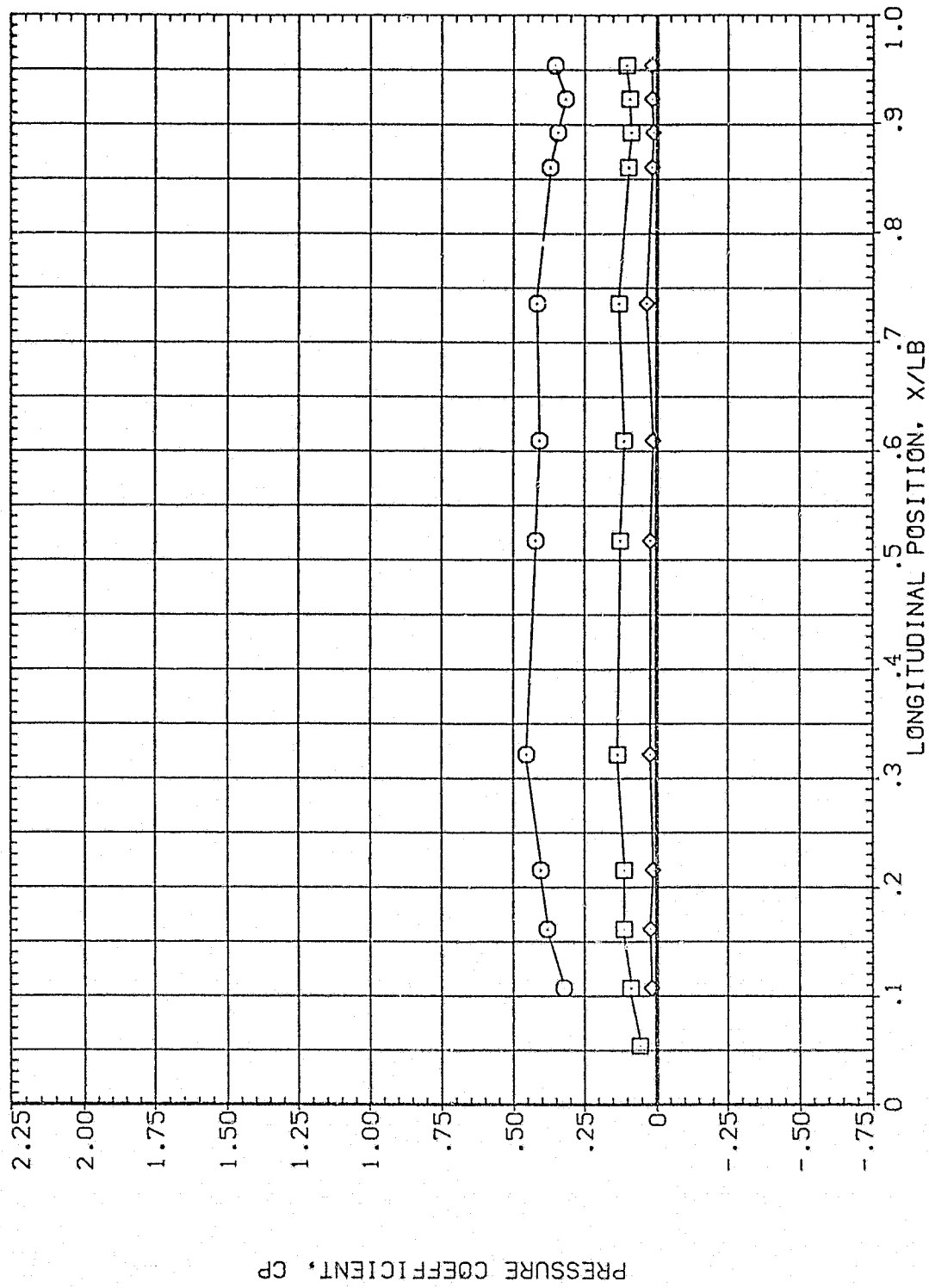


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

SYMBOL

THETA

ALPHA

MACH

315.000
326.000
346.000

94.850

4.960

PARAMETRIC VALUES

BETA
MOUNT

.000
2.000

OFFSET
PHI

90.000
.000

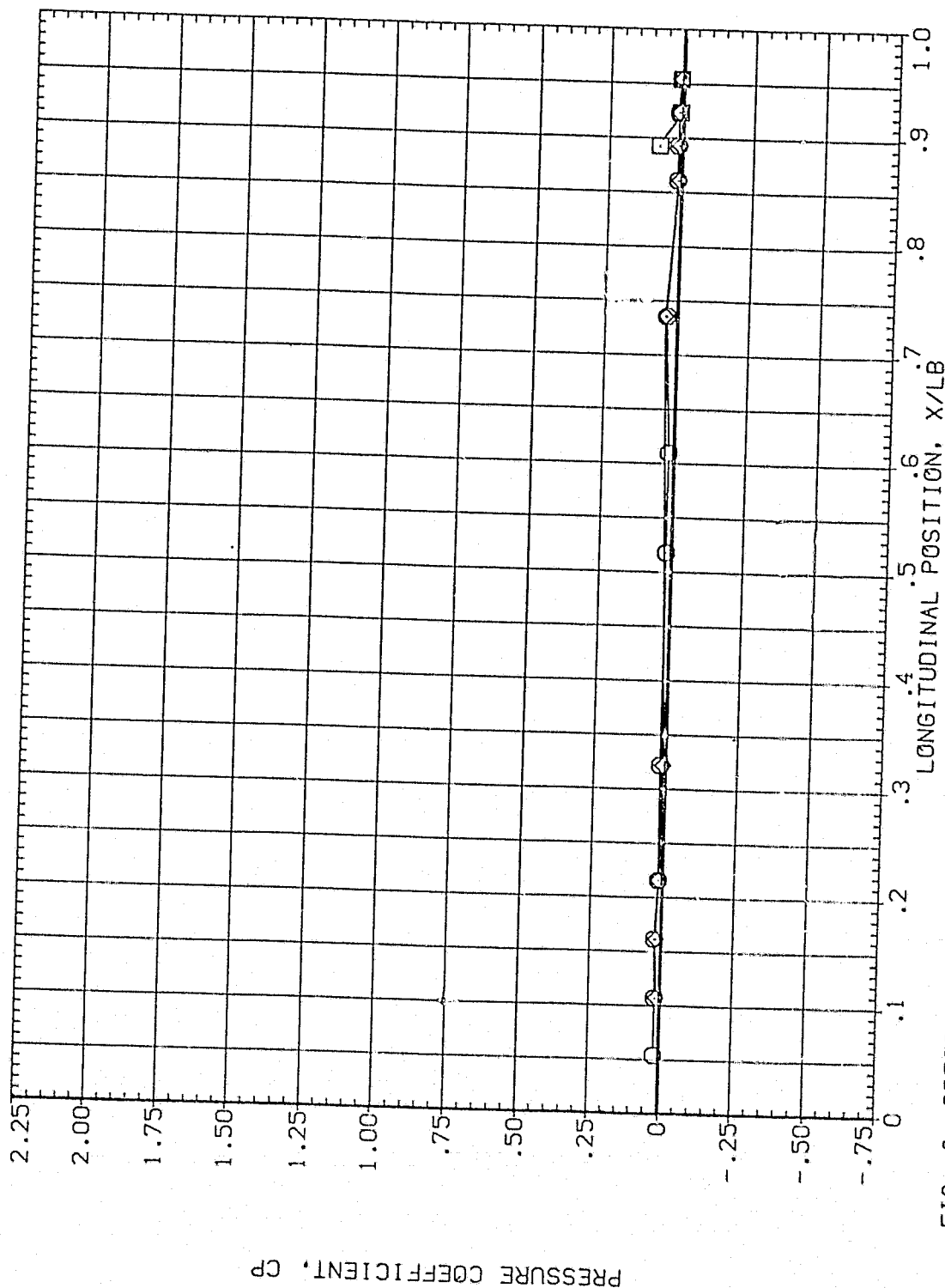


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL
 ○ □ ◇

THETA .000 14.000 24.000
 ALPHA 97.830
 MACH 4.960

PARAMETRIC VALUES
 BETA .000 2.000 90.000
 MOUNT OFFSET PHI .000

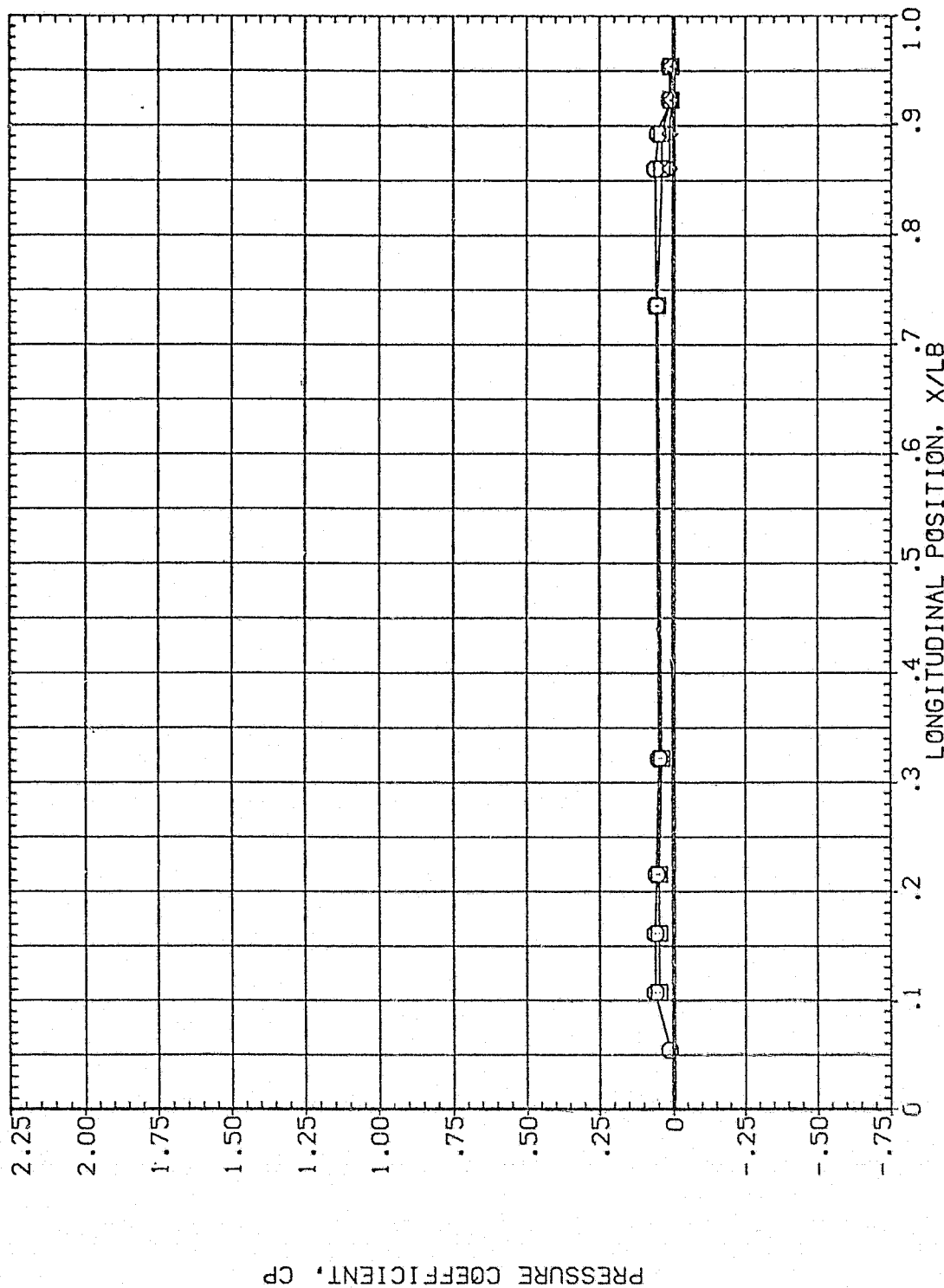


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 PHI 90.000
 .CCO

THETA
 45.000
 67.500
 90.000

SYMBOL
 ○
 □
 ◇

MACH
 4.960

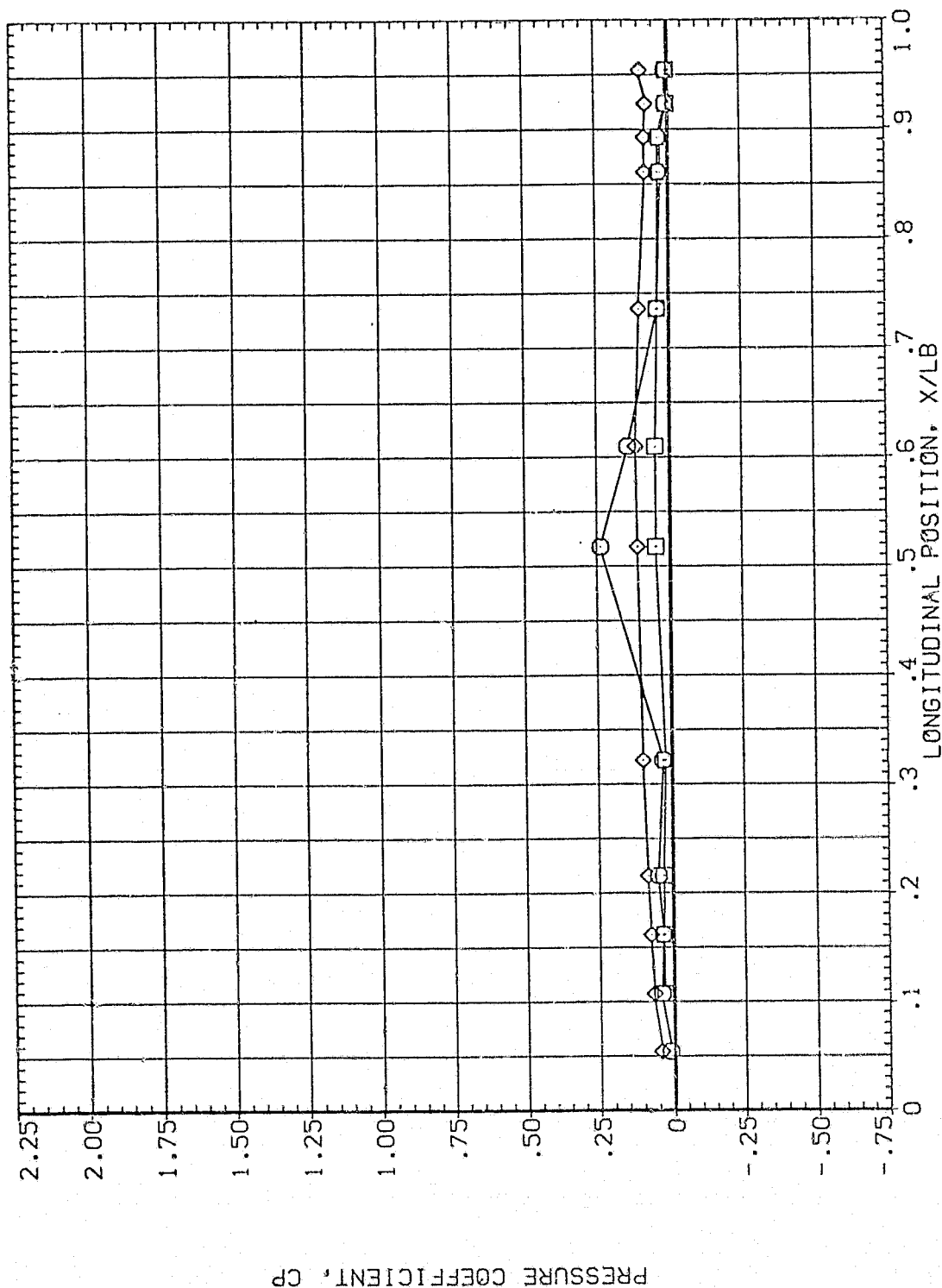


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	97.830	4.960	MOUNT	.000	90.000
□	135.000				2.000	
◇	157.500				.000	

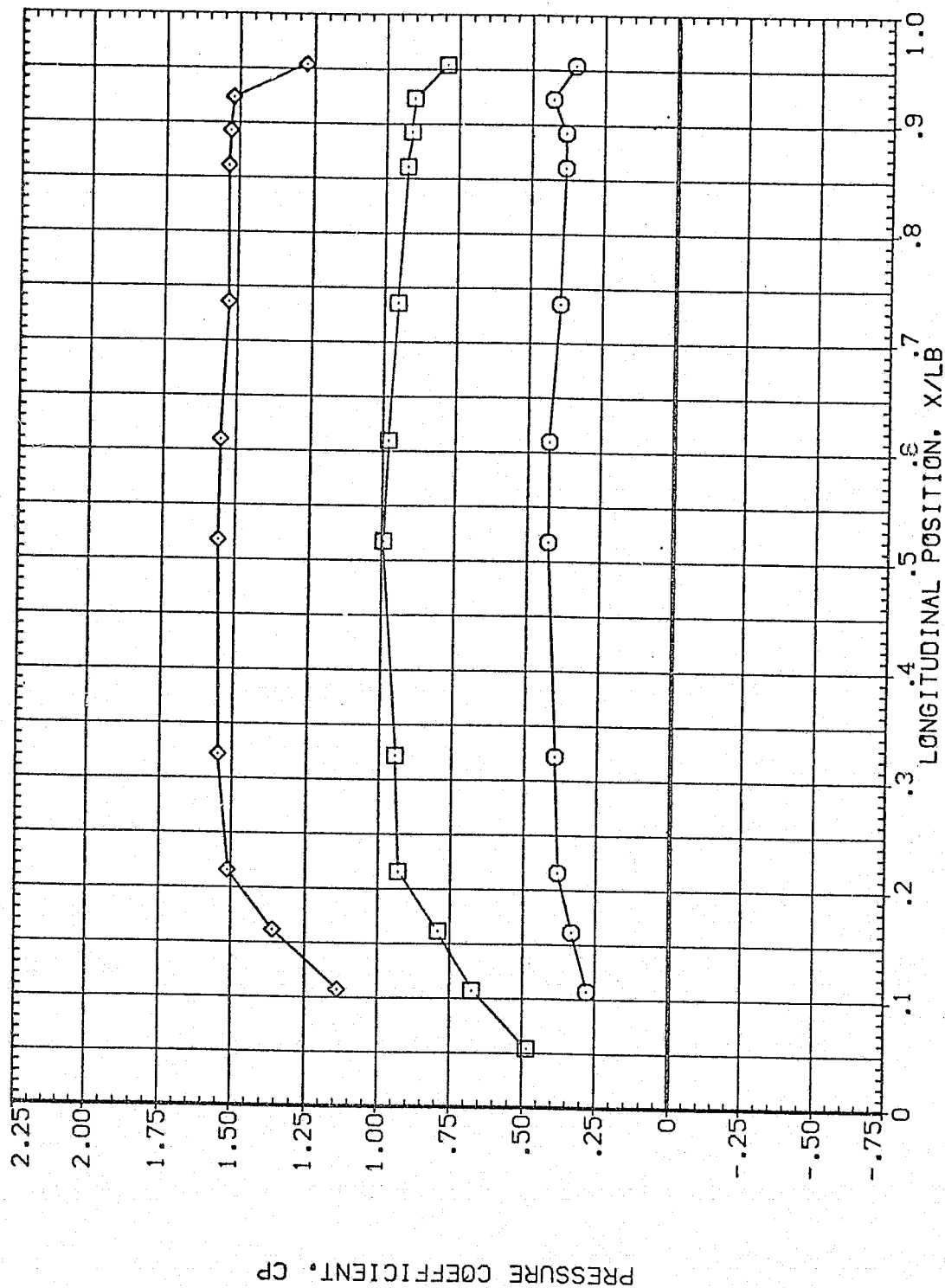


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

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(P1A079)

MSFC 5 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL
○
□
◇

THETA
180.000
202.500
225.000

ALPHA
97.830

MACH
4.960

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000

OFFSET
PHI
90.000
.000

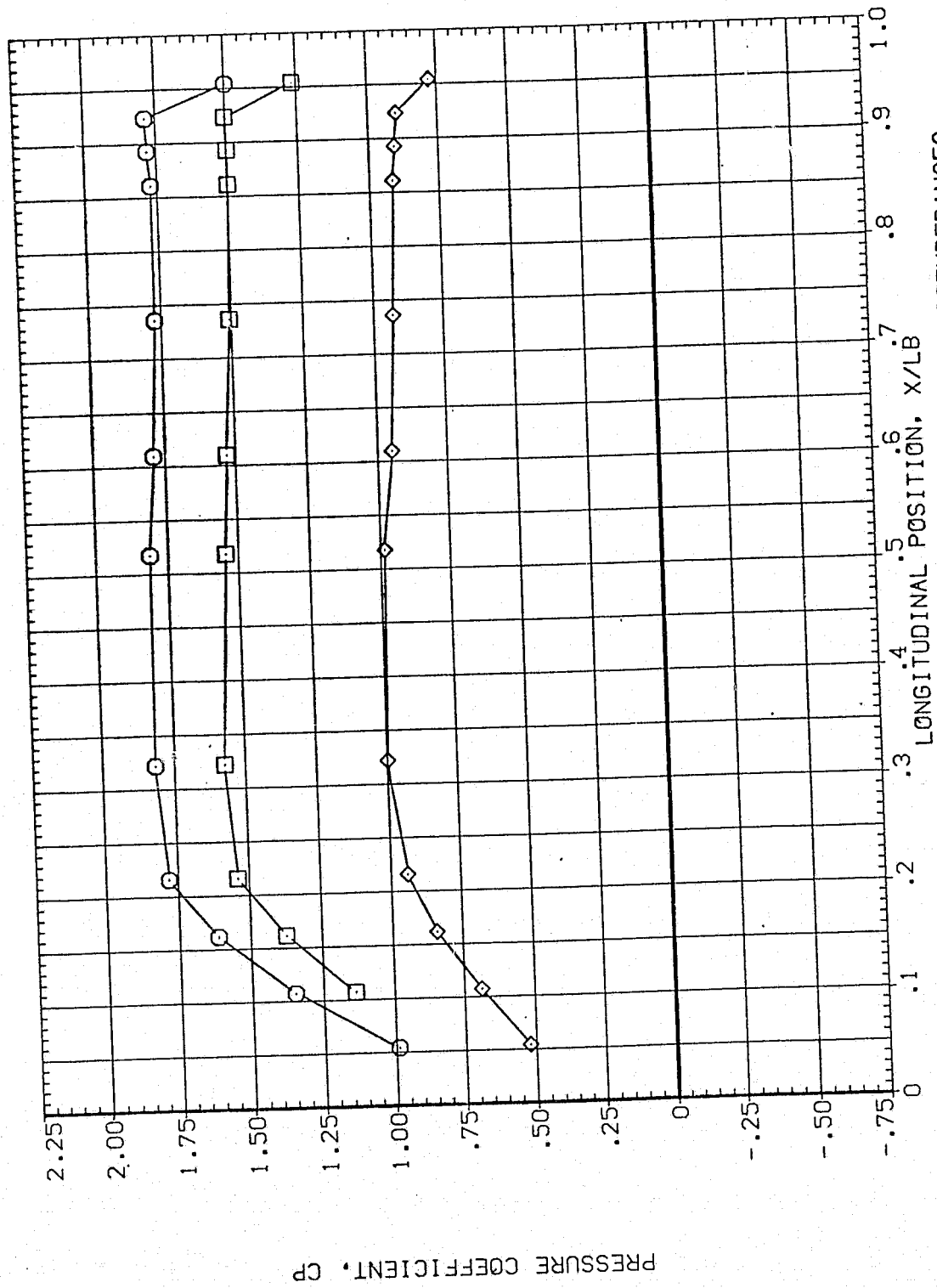


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL

THETA
247.500
270.000
292.500

ALPHA
97.830
MACH
4.960

PARAMETRIC VALUES
BETA
MOUNT

.000
2.000
90.000
OFFSET
PHI
.000

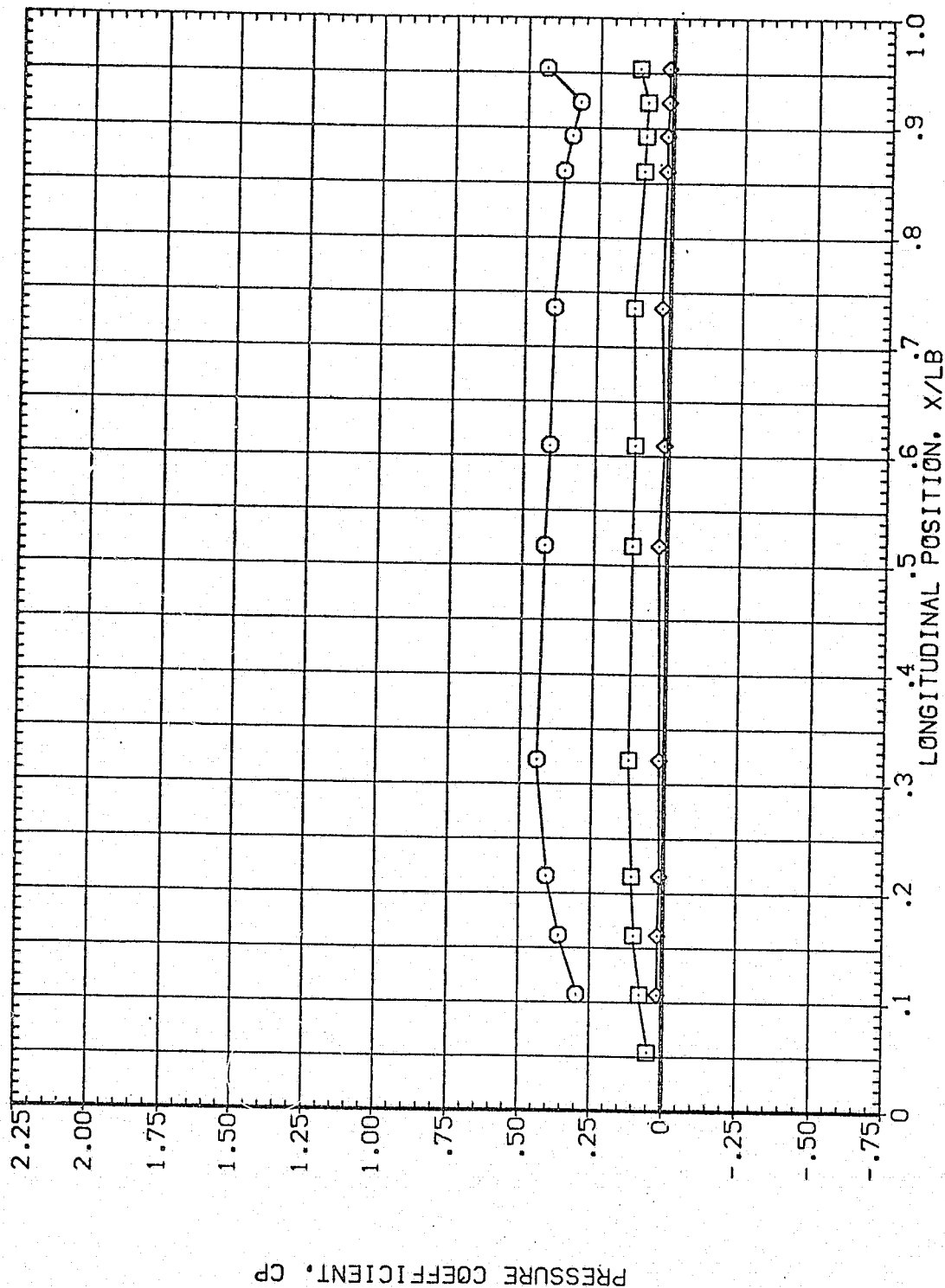


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

(P1A079)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2.

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
OFFSET PHI .000
90.000

SYMBOL THETA ALPHA MACH
315.000 97.830 4.960
326.000
346.000

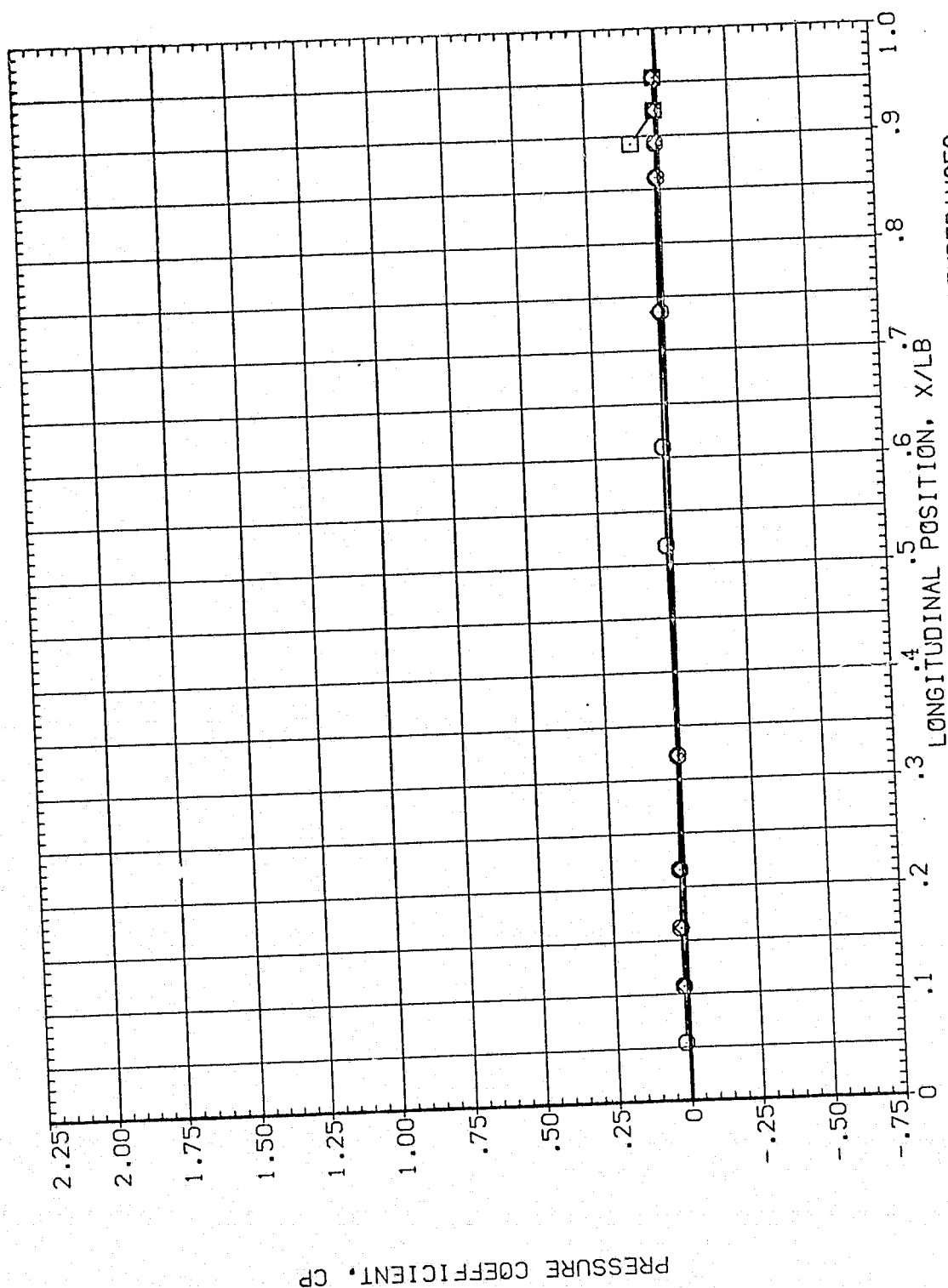


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES		
	.000	14.000	99.750	24.000			BETA	OFFSET	PHI
○							MOUNT	.000	90.000
□								2.000	.000
◇									

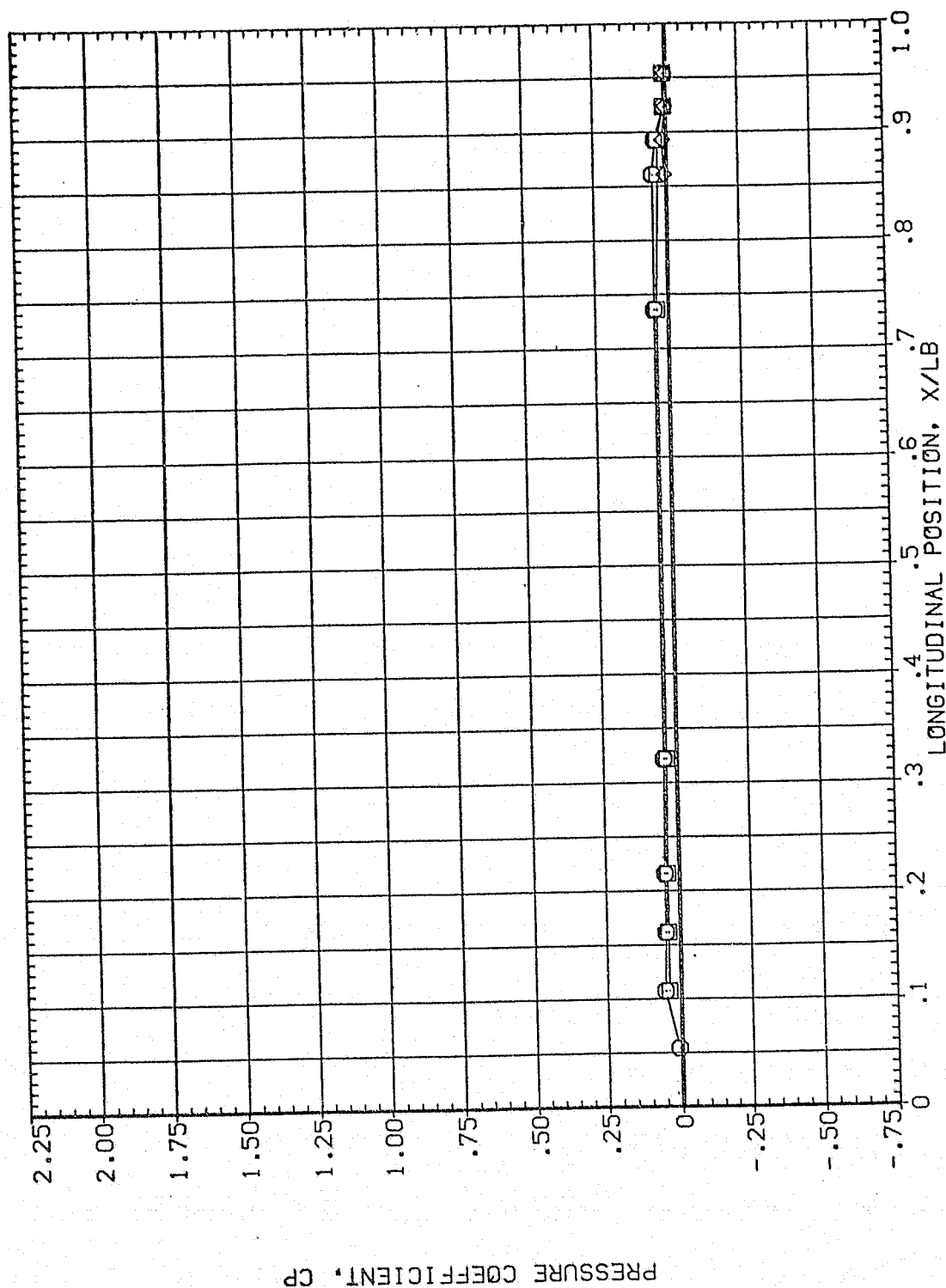


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	THETA		ALPHA		MACH		PARAMETRIC VALUES			
	45.000	99.750	99.750	99.750	4.960	4.960	BETA	.000	OFFSET	90.000
○	67.500						MCOUNT	2.000	PHI	.000
□	90.000									
◇										

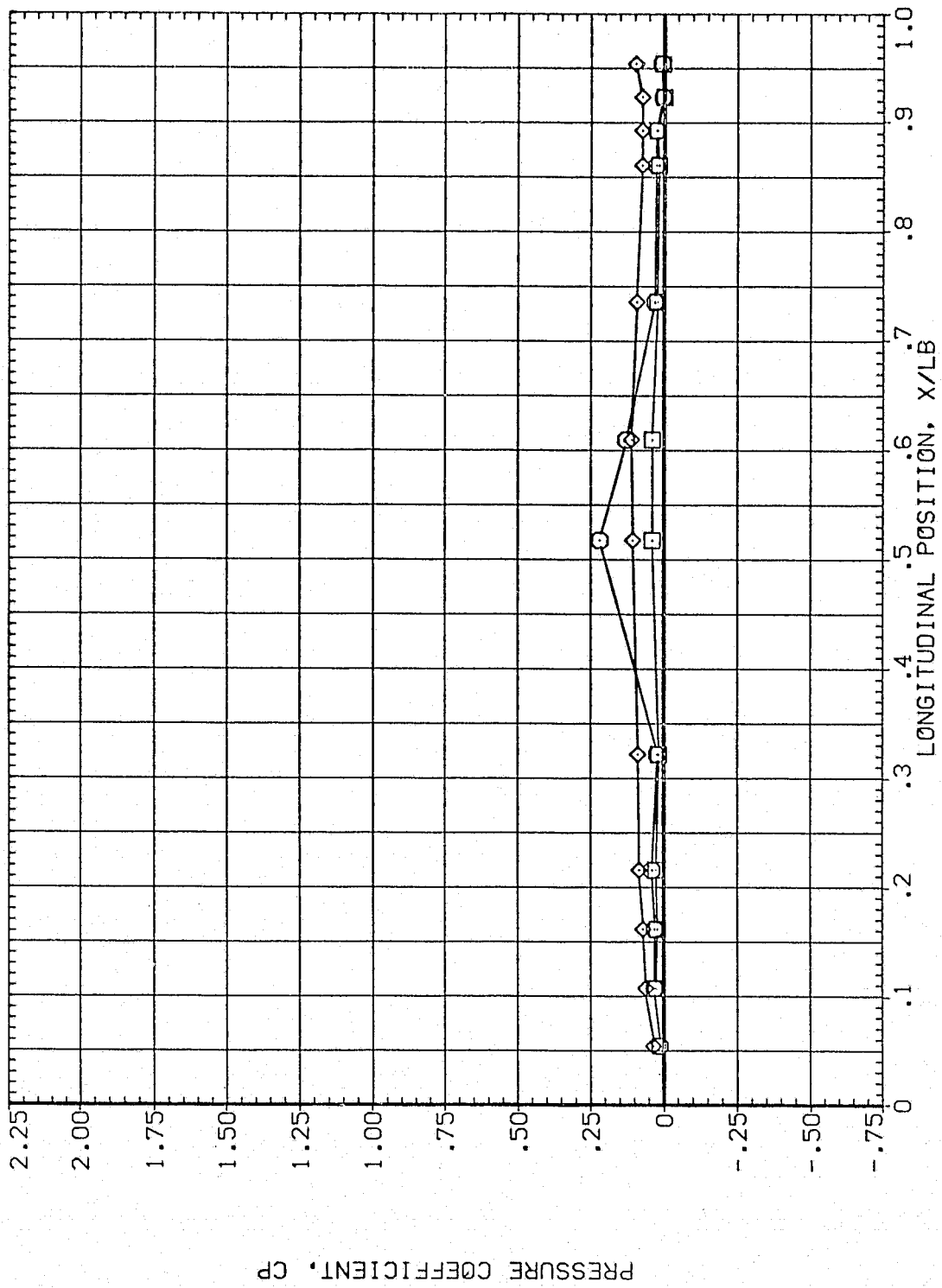


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	THETA	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	112.500	99.750	4.960	MOUNT	.000	.000
□	135.000				2.000	
◇	157.500					

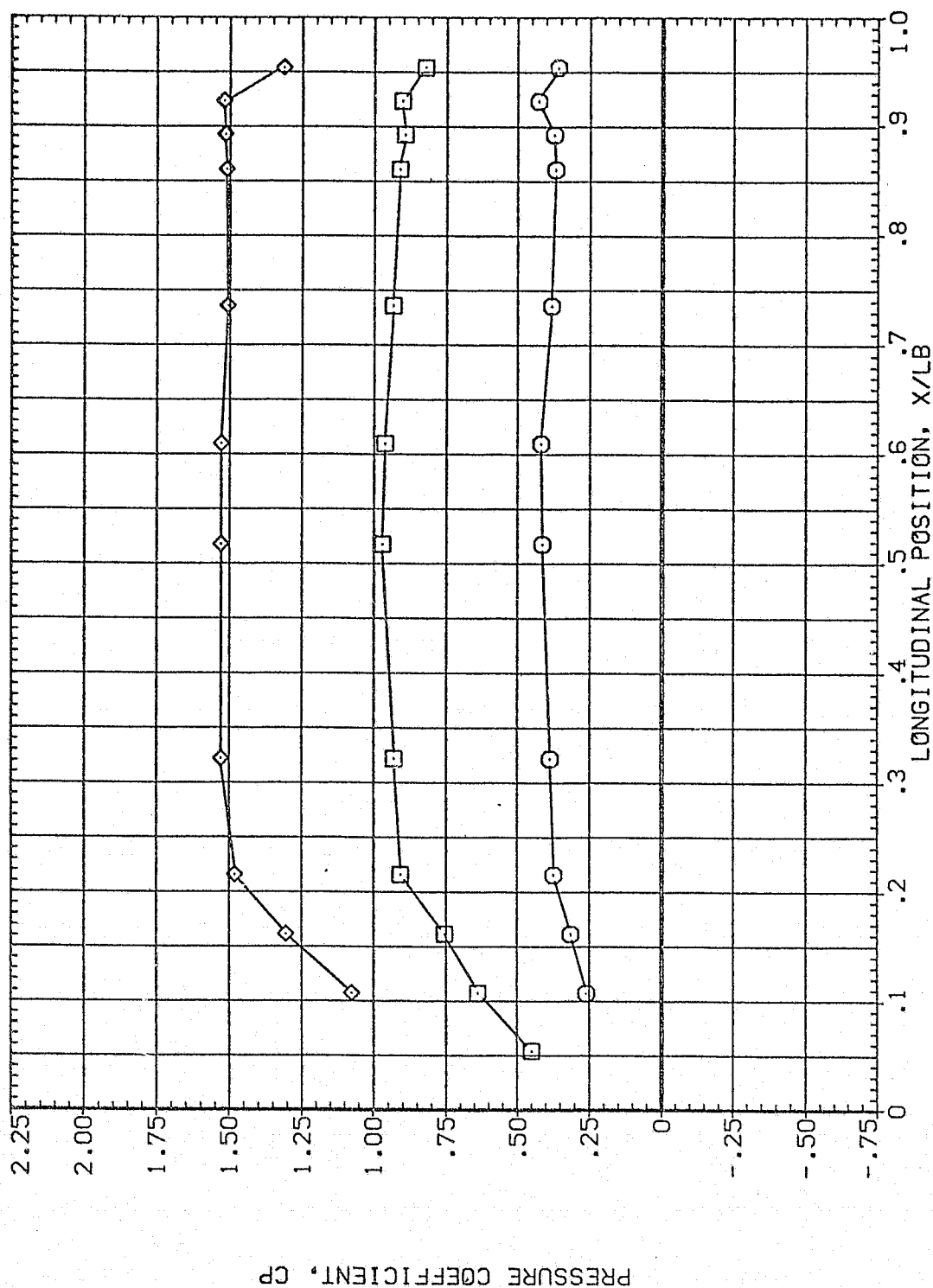


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	THETA		ALPHA		MACH		BETA		PARAMETRIC VALUES		
	180.000	202.500	99.750	99.750	4.960	4.960	MOUNT	MOUNT	.000	OFFSET	90.000
○									2.000	PHI	.000
□											
◇											

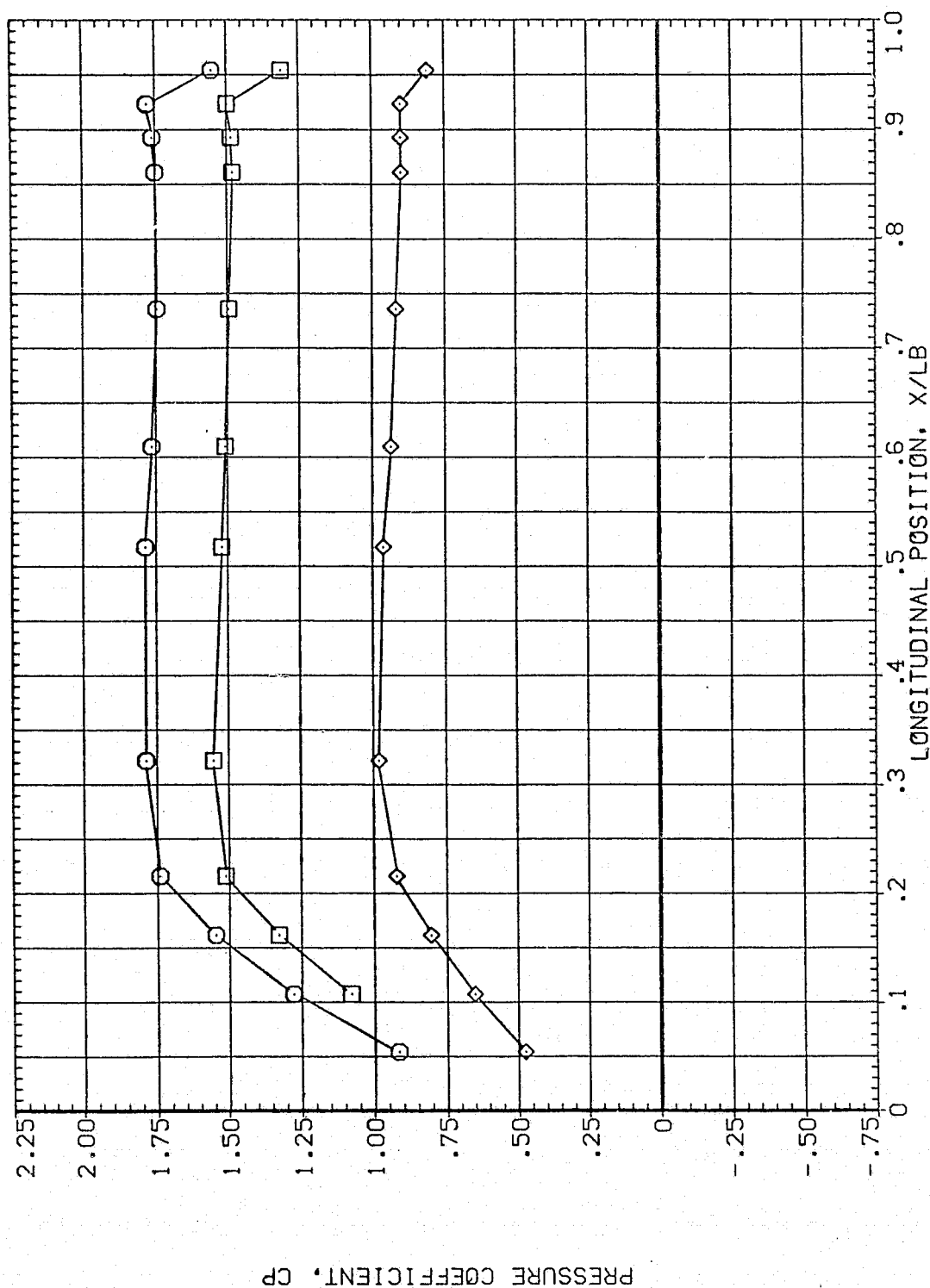


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	THETA	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	247.500	99.750	4.960	MOUNT	.000 OFFSET
□	270.000				2.000 PHI
◇	292.500				90.000

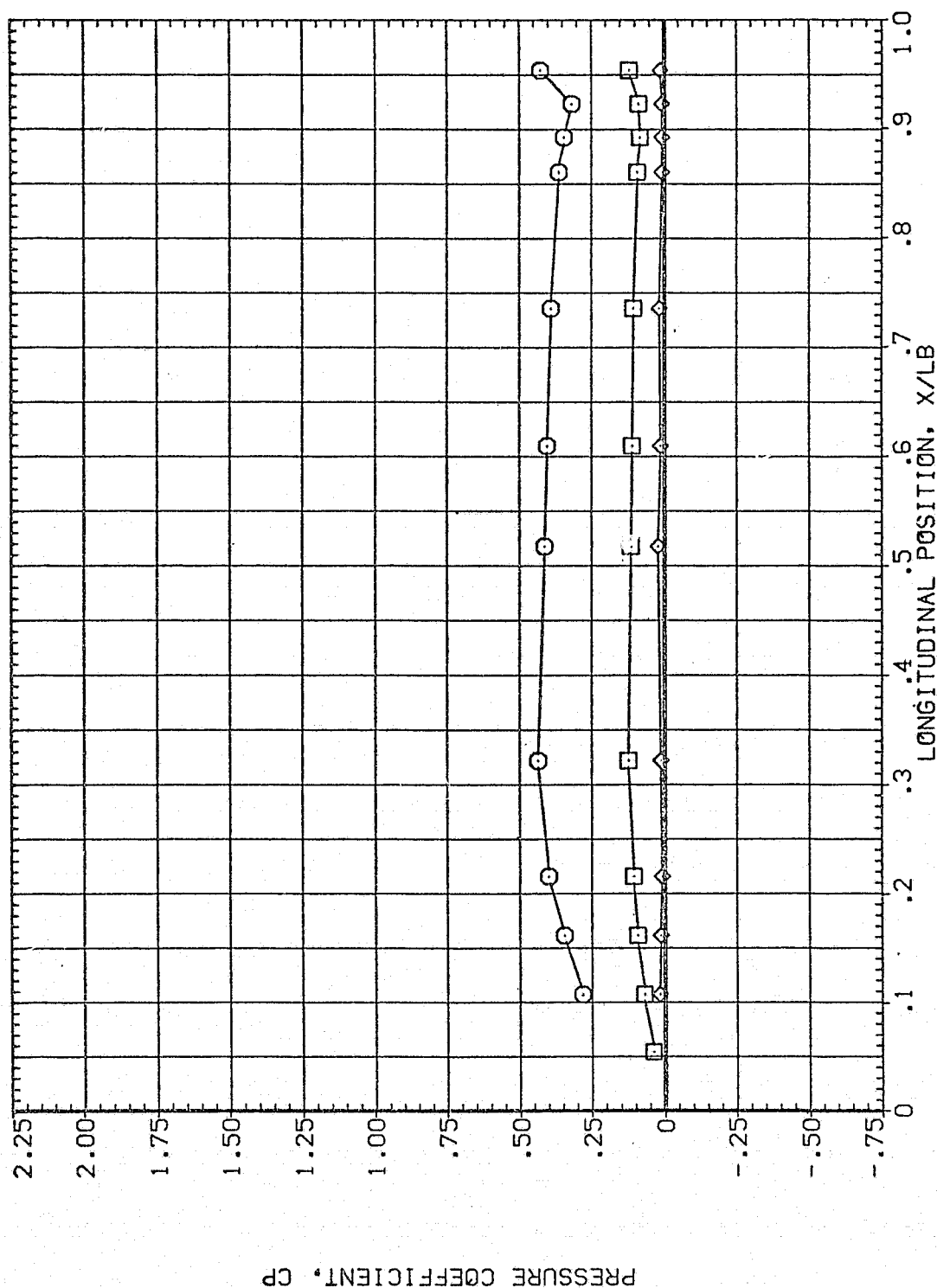


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 .000 OFFSET 90.000
 2.000 PHI .000

SYMBOL THETA ALPHA MACH
 315.000 99.750 4.960
 326.000
 346.000

BETA
 MOUNT

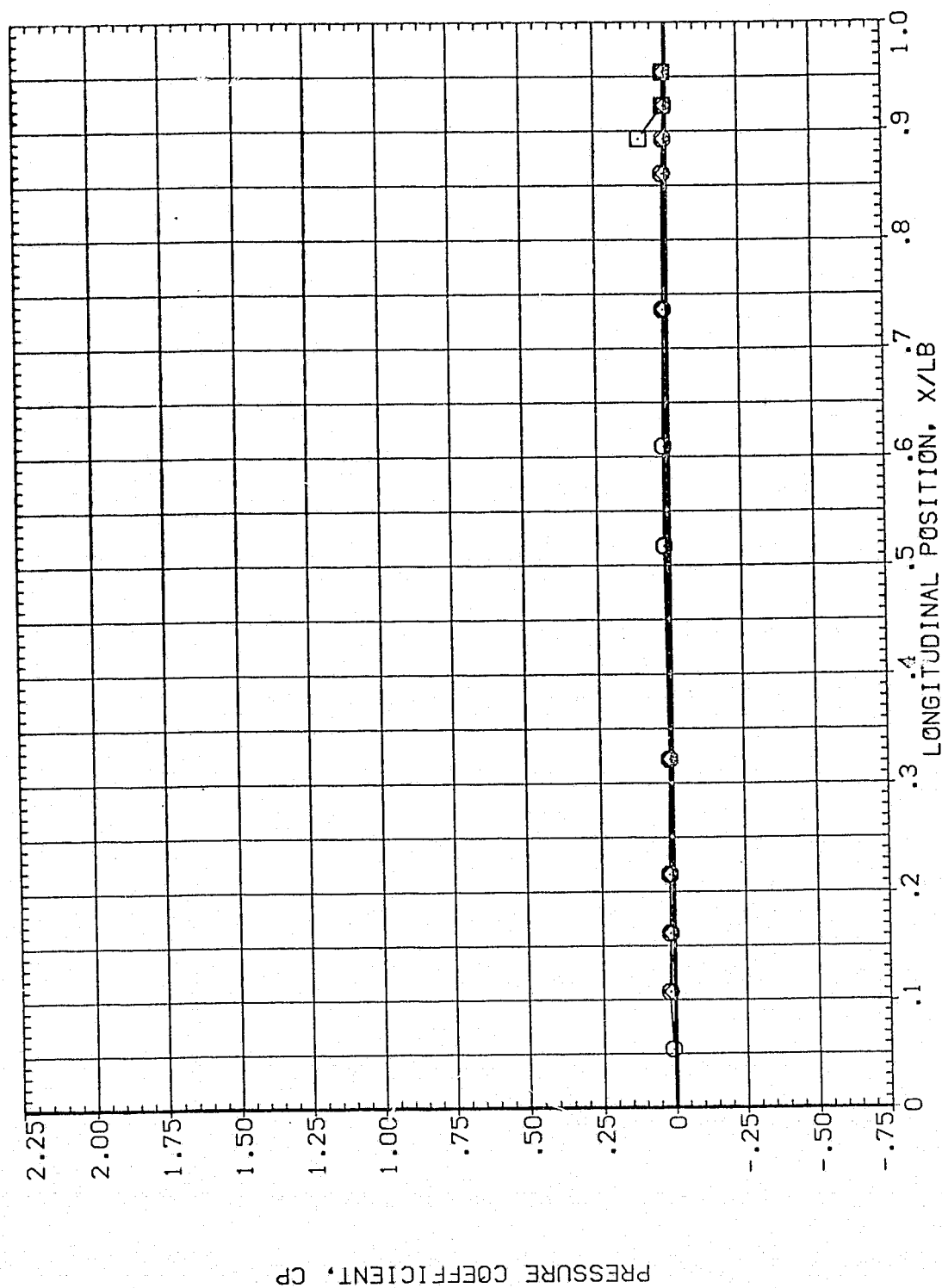


FIG. 8 PRESSURE DISTRIBUTION OVER ET - T2 MODEL WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	51.110	1.960	.000	.000	.000
□	.108			2.000		
◇	.162					

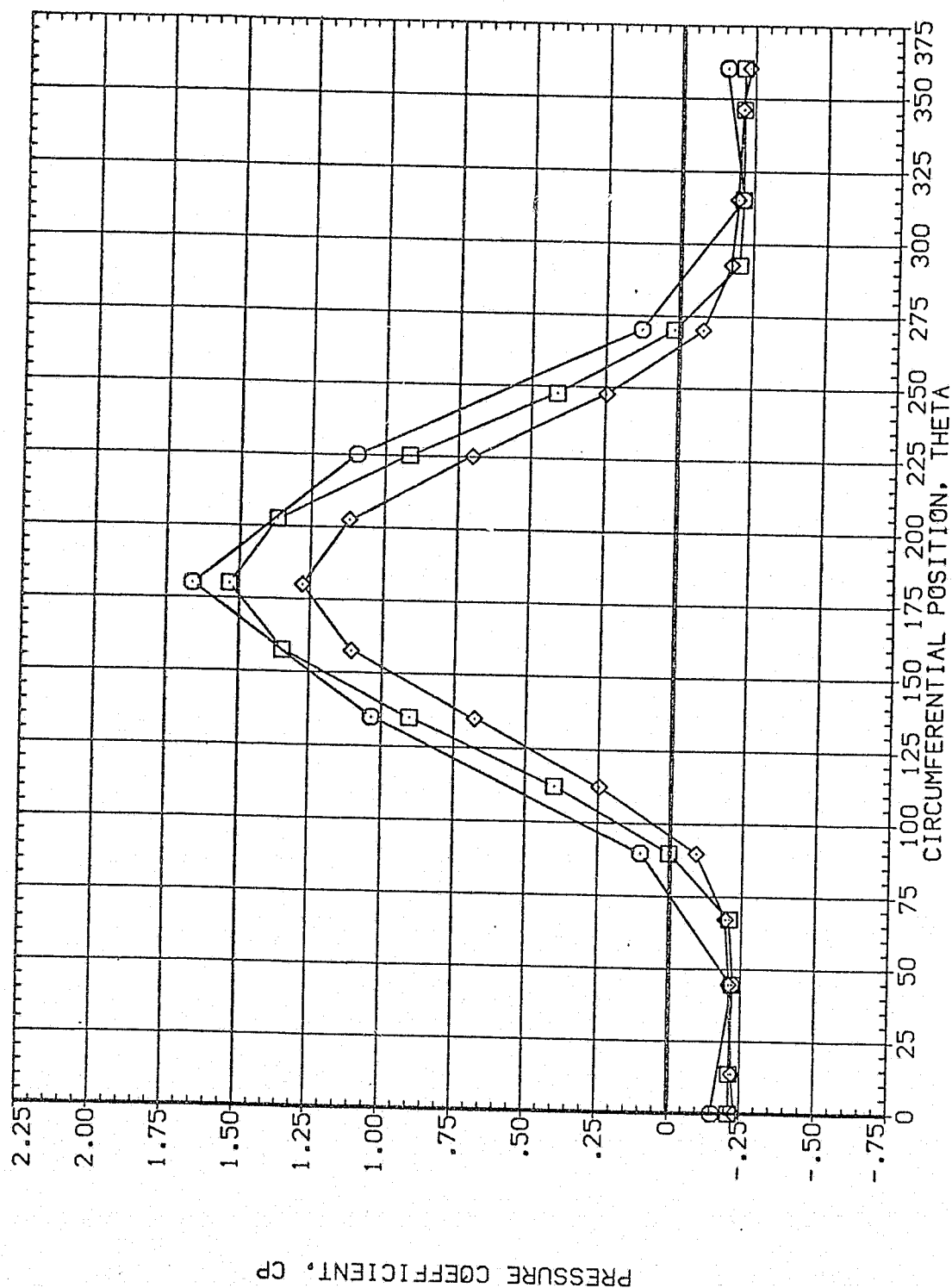


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2441

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.216	51.110	1.960	MOUNT	.000 OFFSET
□	.322				2.000 PHI
◇	.518				60.000

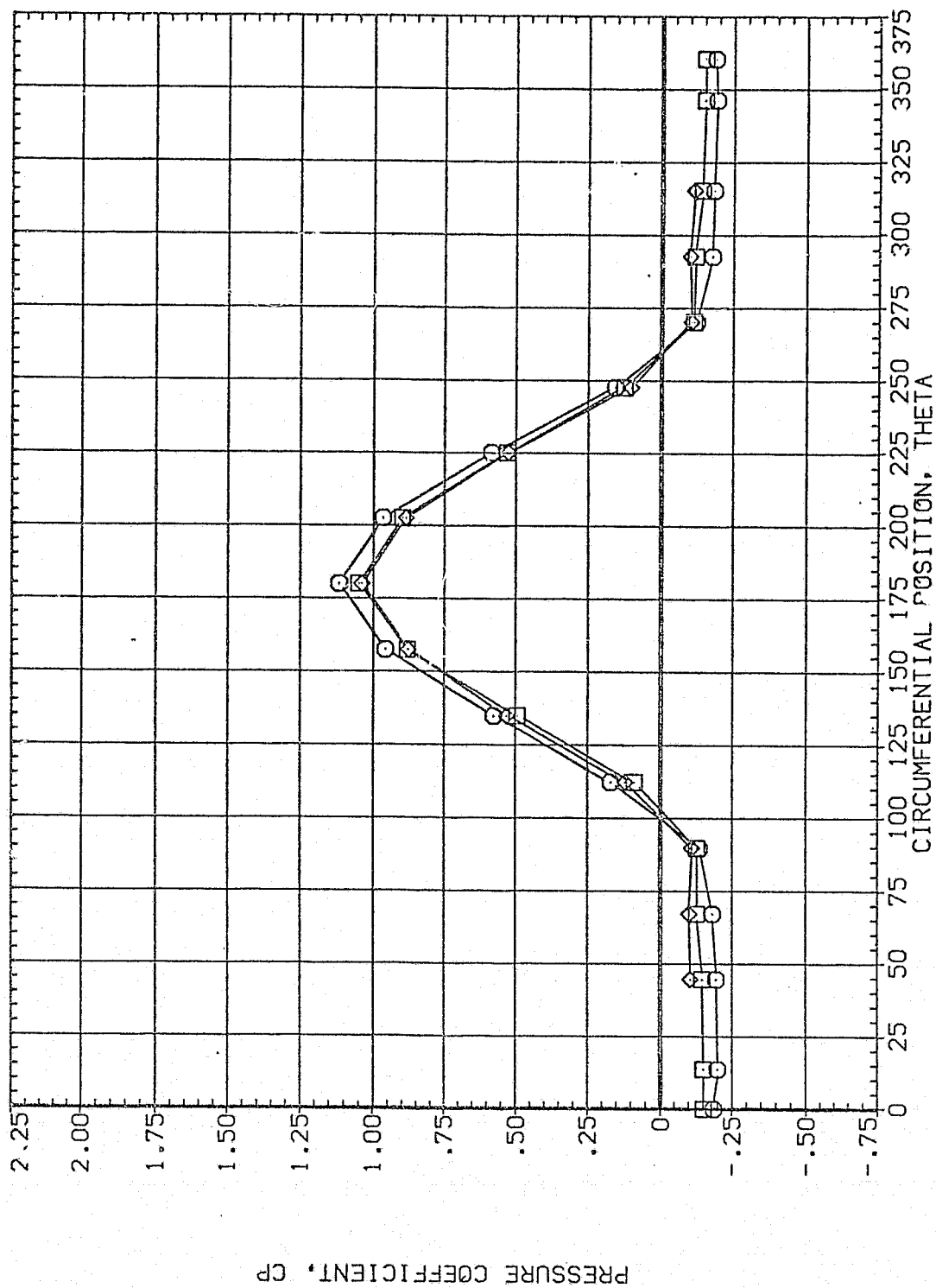


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	51.110	1.960	MOUNT	.000	.000
□	.735				2.000	
◇	.860					

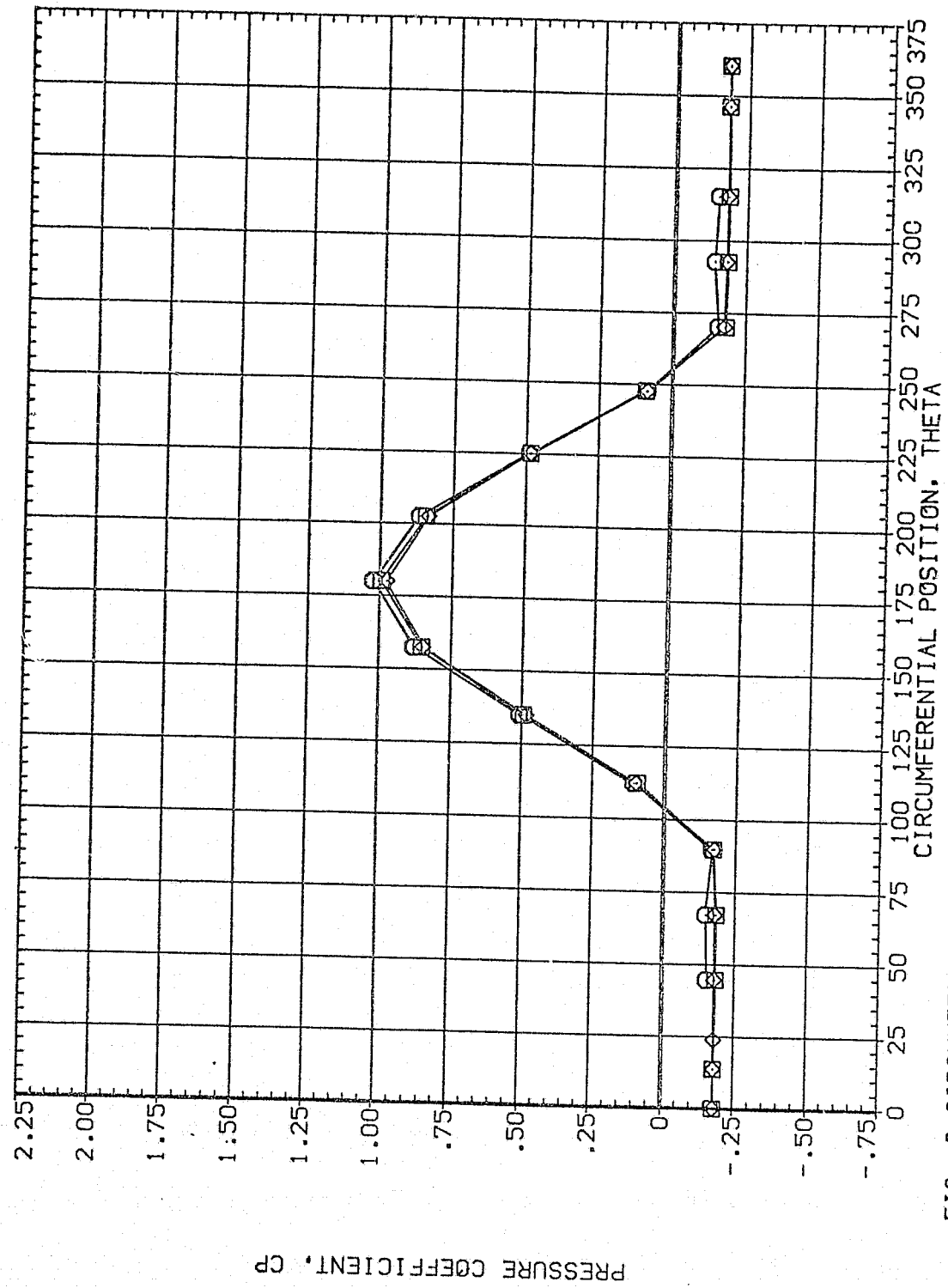


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	.892	51.110	1.960	MOUNT	.000 OFFSET
◇	.923				2.000 PHI
	.954				

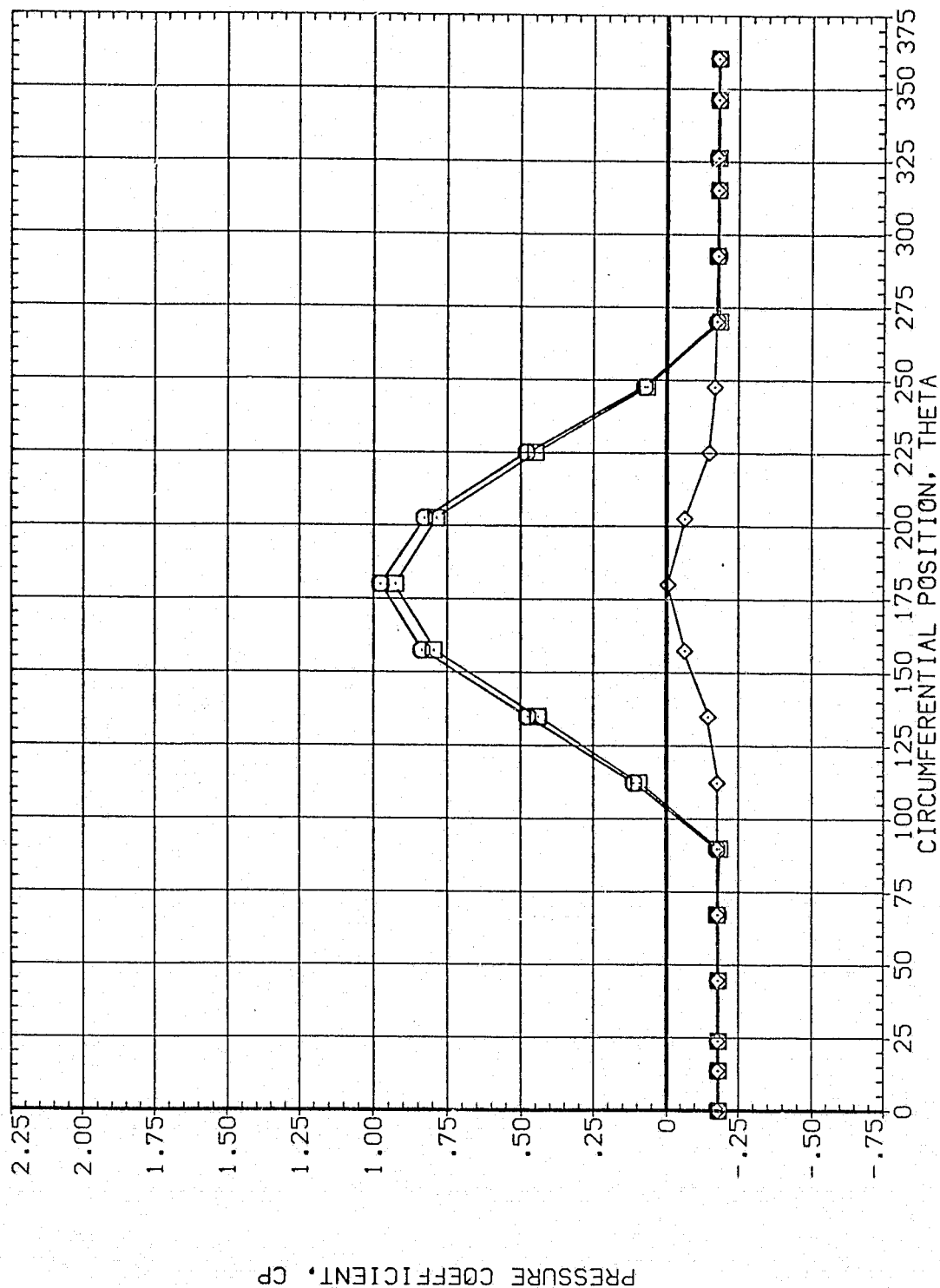


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	.000	60.000
○	.055	54.110	1.960	MOUNT	2.000	.000
□	.108					
◇	.162					

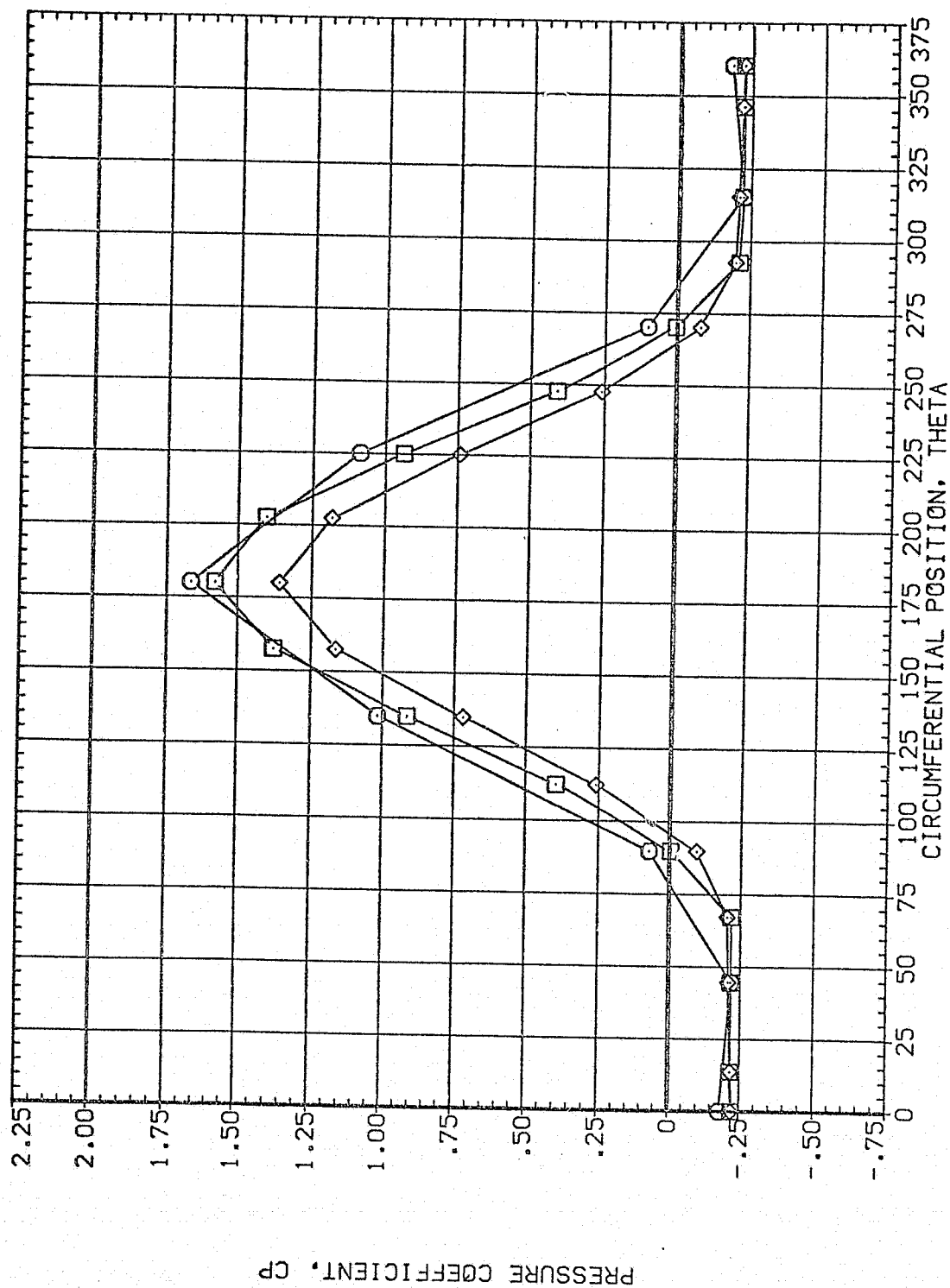


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK- T2 (P1A062)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.216	54.110	1.960	.000	.000	.000
□	.322			2.000		
◇	.518					

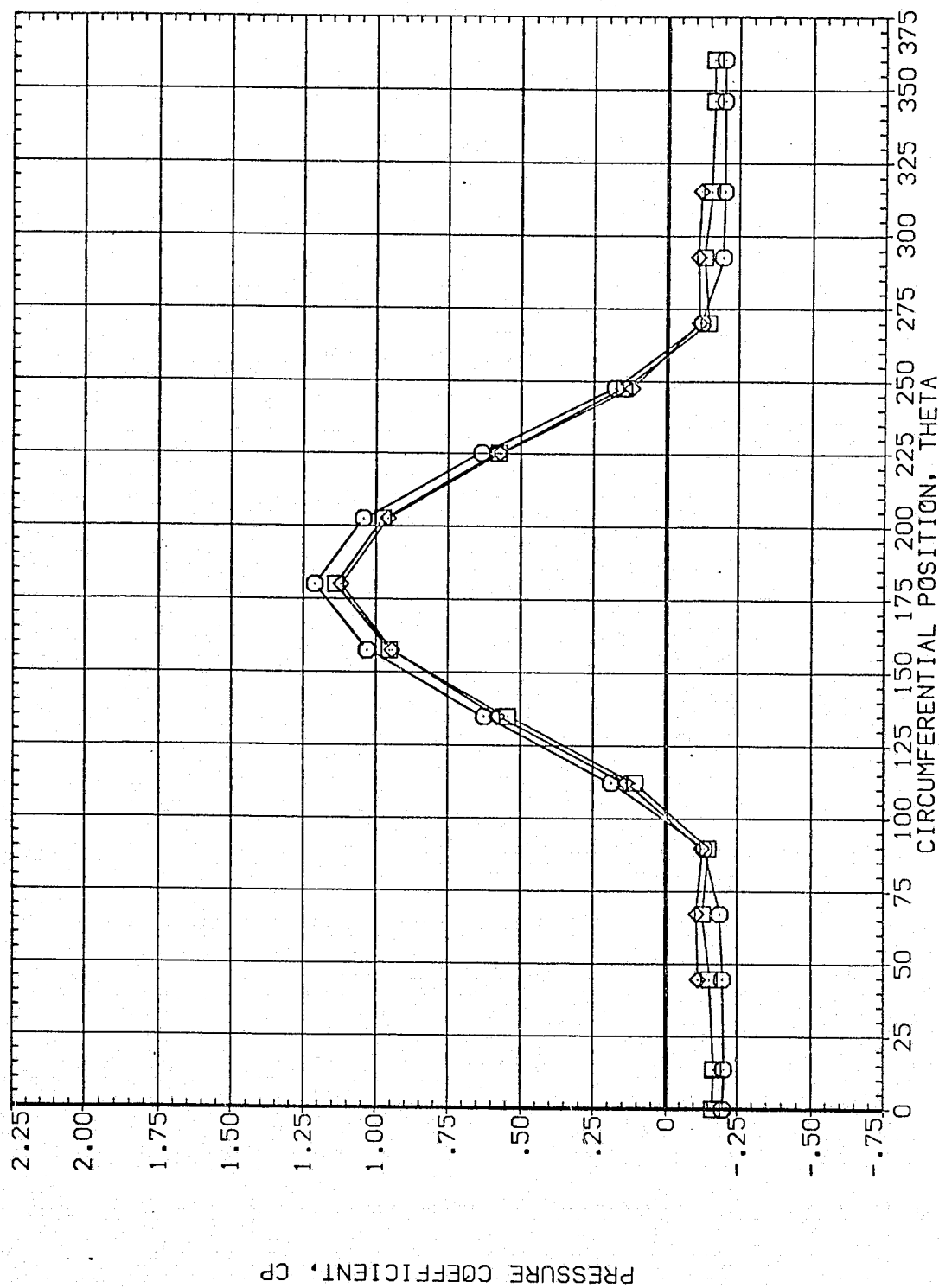


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL
 ○ □ ◇

X/LB ALPHA MACH
 .610 54.110 1.960
 .735
 .860

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 60.000
 .000

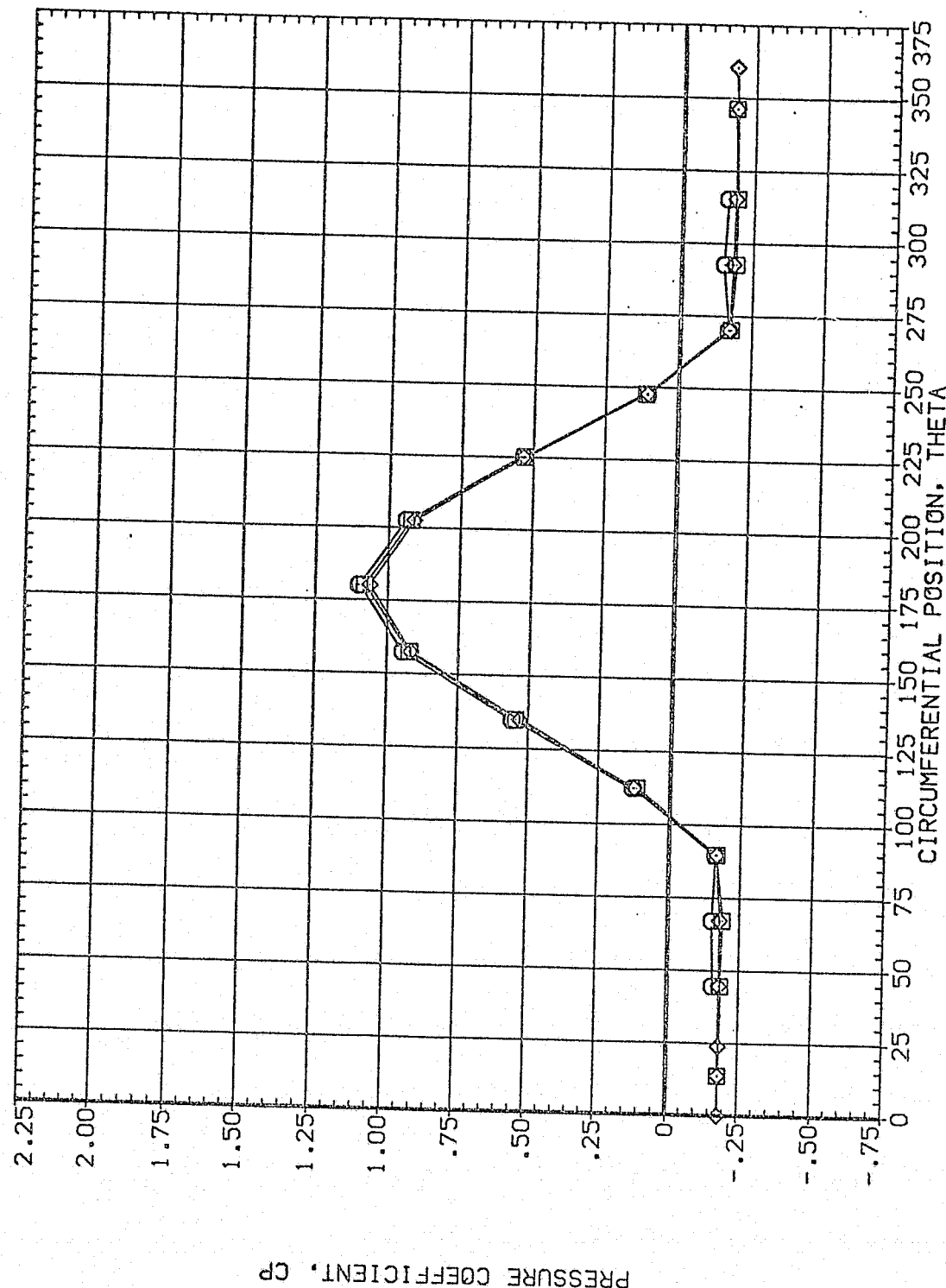


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL
○
□
◇

X/LB .892
ALPHA 54.110
MACH 1.960
.923
.954

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
OFFSET PHI 60.000
.000

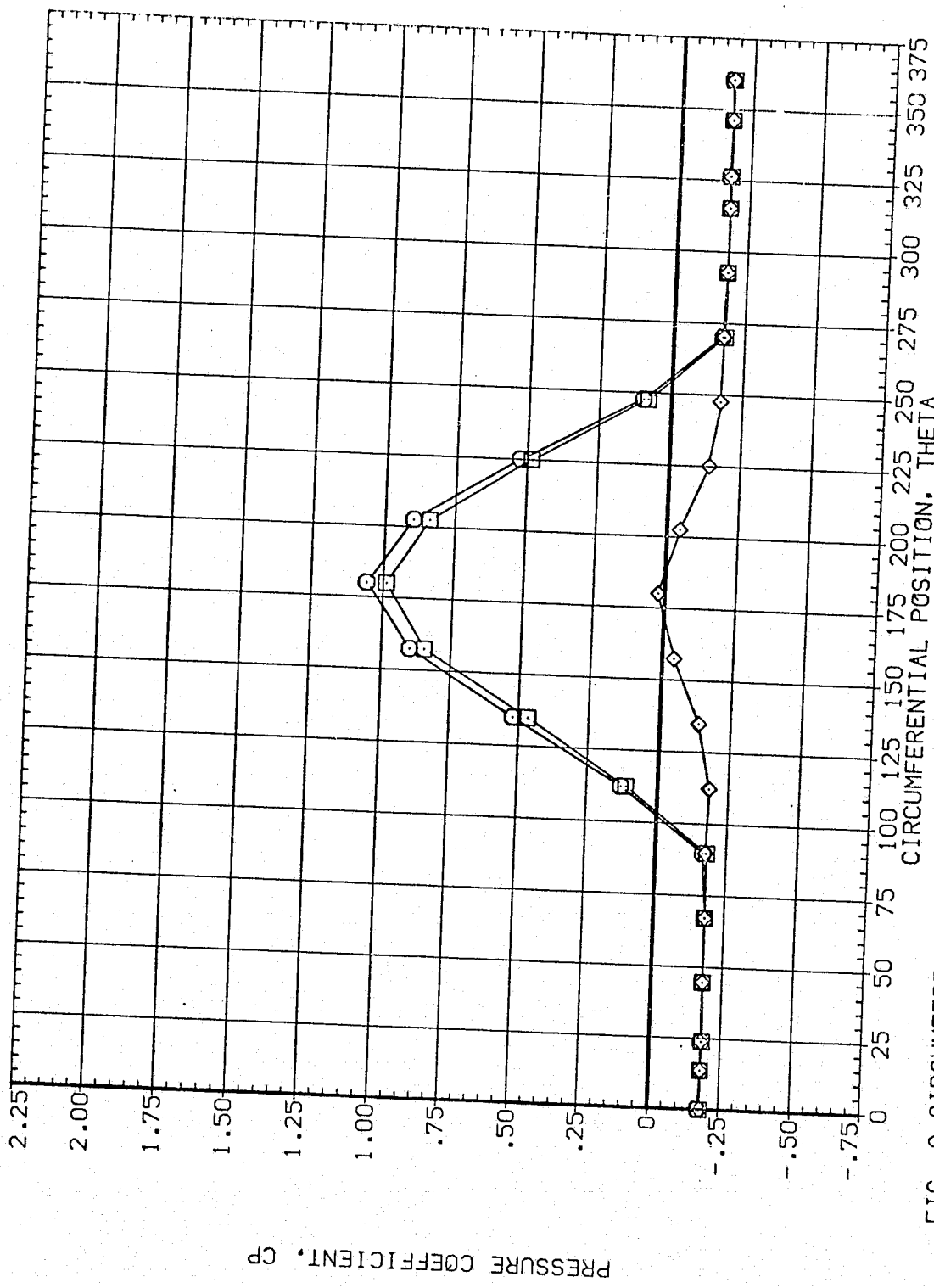


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (7A-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL X/LB ALPHA INCH

57.110 1.980

.055 .028 .02

PARAMETRIC VALUES
BETA HOUNT
2.000 60.000
OFFSET PHI
.000 .000

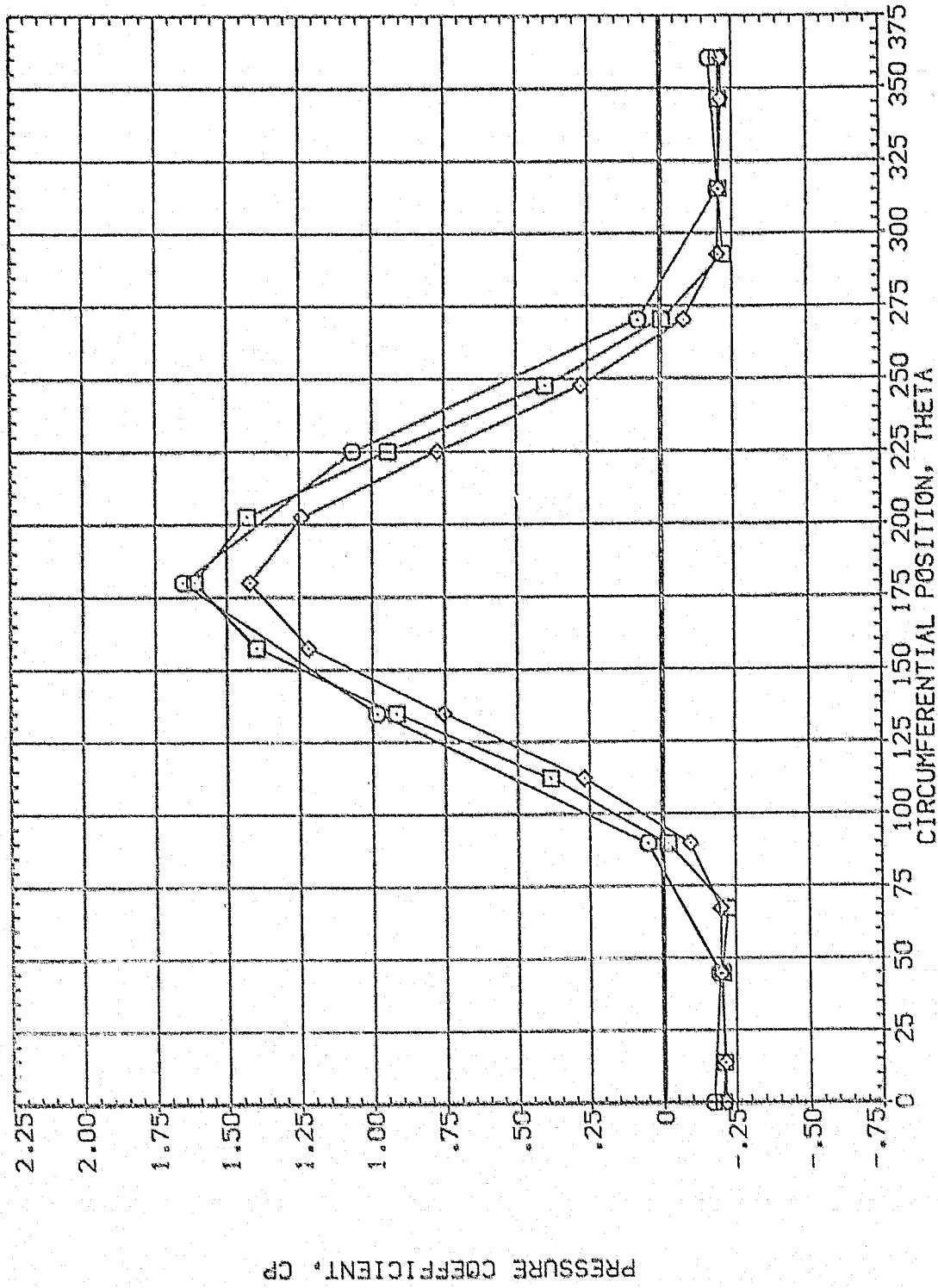


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL X/LB ALPHA MACH
 □ .216 57.110 1.960
 ◇ .322
 ◇ .518

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 PHI 60.000
 .000

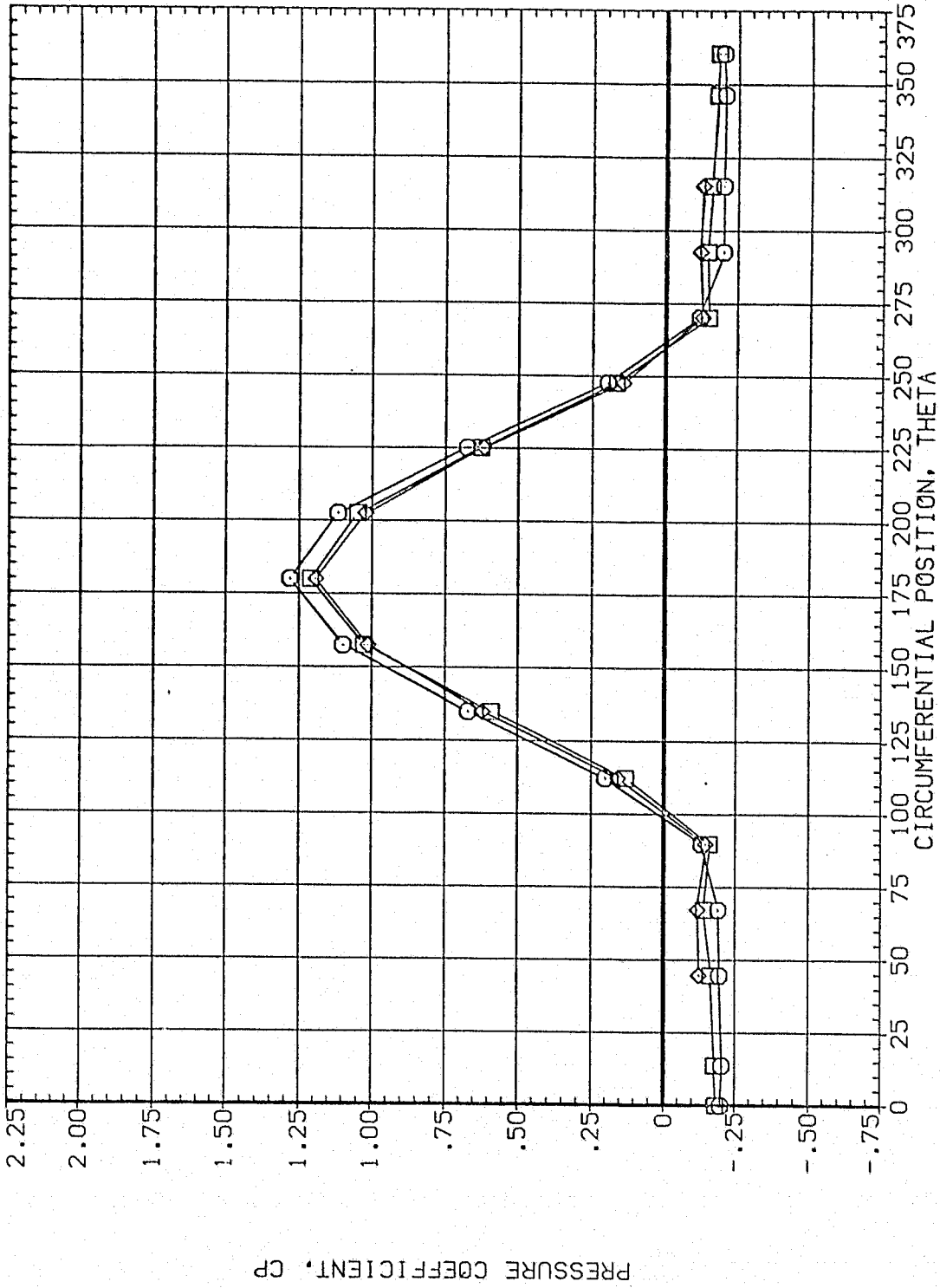


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2450

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL
 ○
 □
 ◇

X/LB .610
 ALPHA 57.110
 MACH 1.960
 .735
 .860

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 60.000
 .000

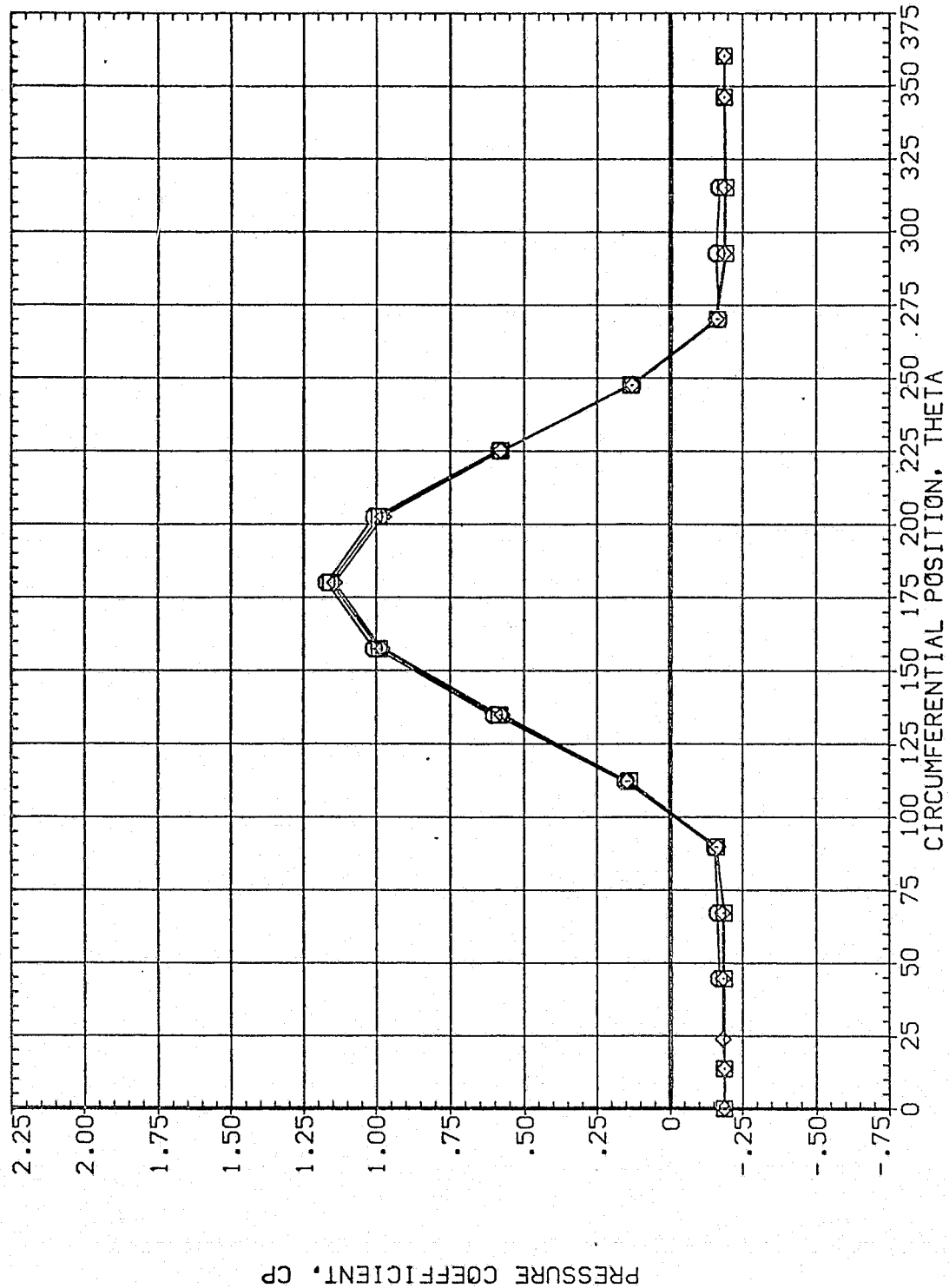


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL X/LB ALPHA MACH
 ○ .892
 □ .923
 ◇ .954

PARAMETRIC VALUES
 BETA .000
 MCUNT 2.000
 OFFSET 60.000
 PHI .000

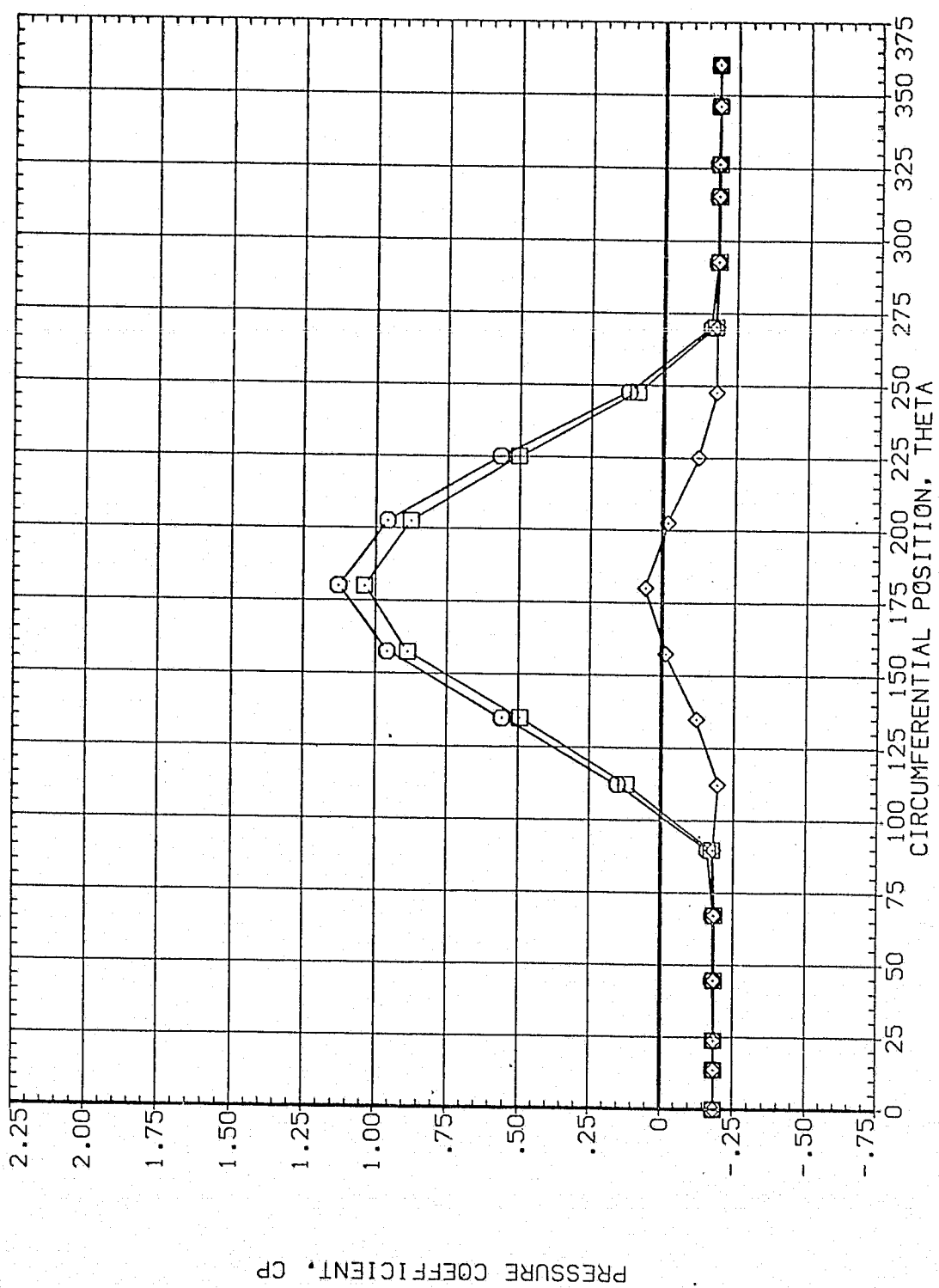


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2. (P1A064)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	60.130	1.970	MOUNT	.000	.000
□	.108				2.000	
◇	.162					

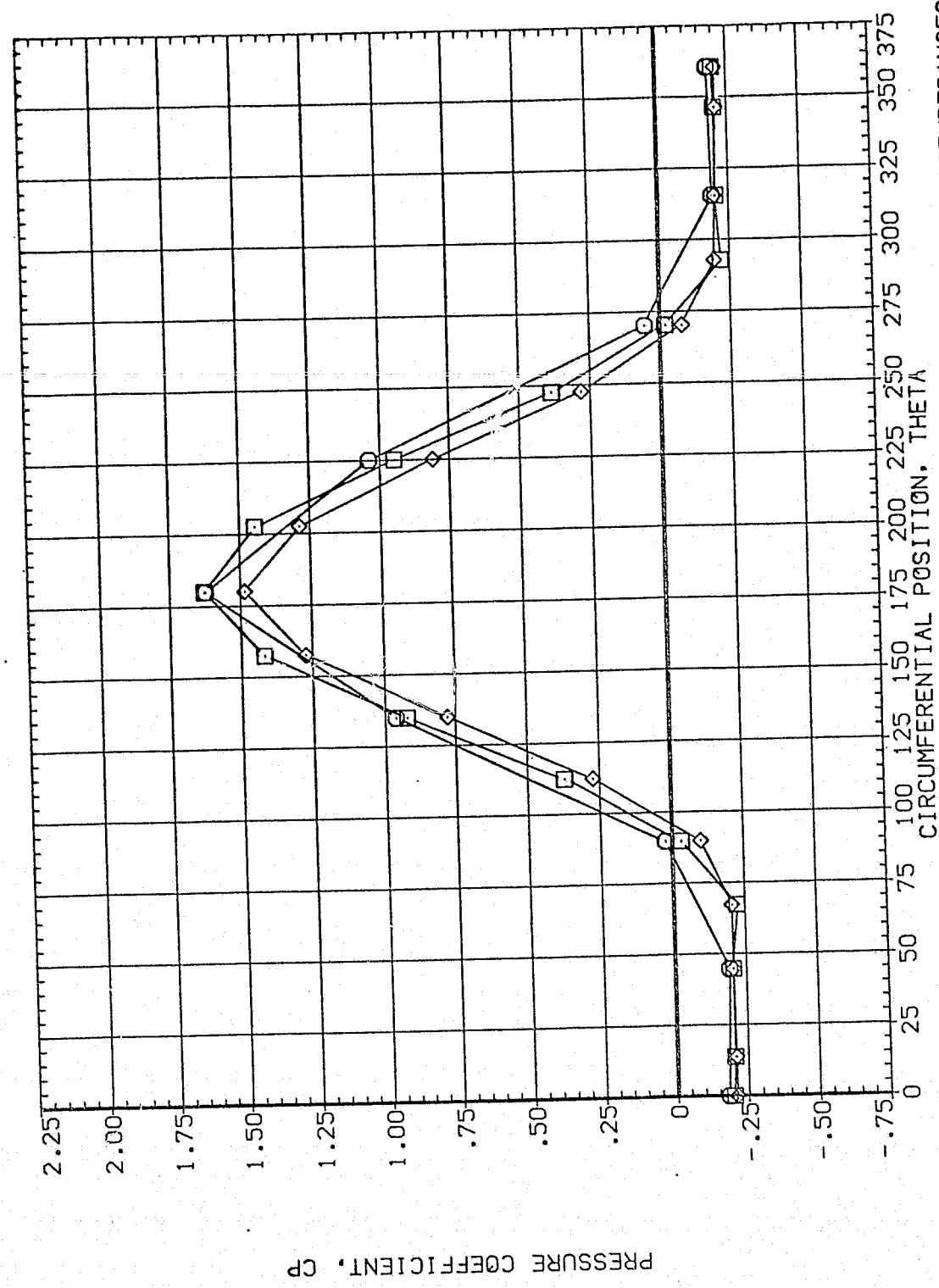


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
				MOUNT	PHI	.000
○	.216	60.130	1.970			
□	.322					
◇	.518					

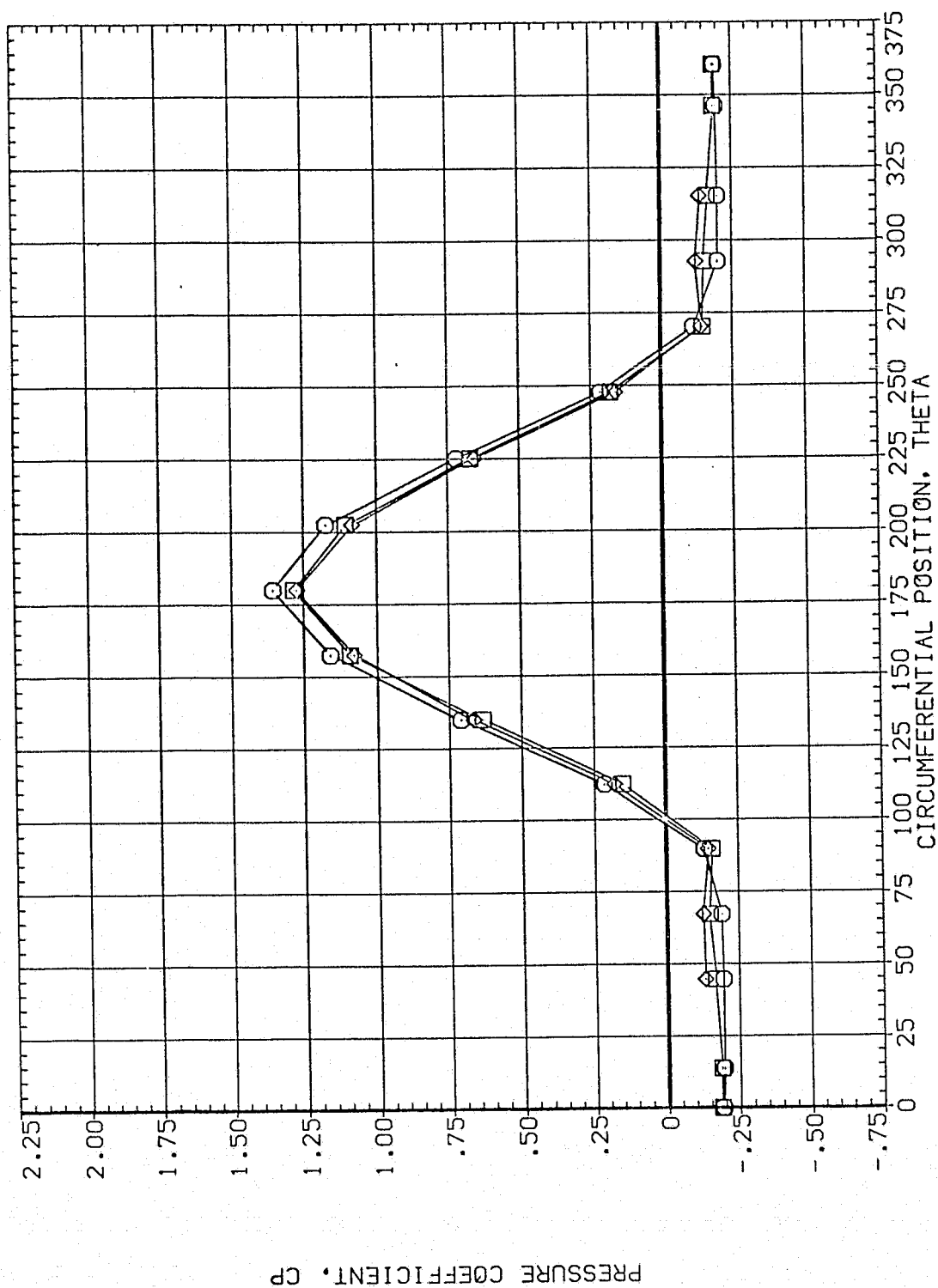


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL
 ◇
 □
 ○

X/LB .610
 .735
 .860

ALPHA 60.130
 MACH 1.970

BETA
 MOUNT

PARAMETRIC VALUES
 .000 .000 60.000
 PHI .000

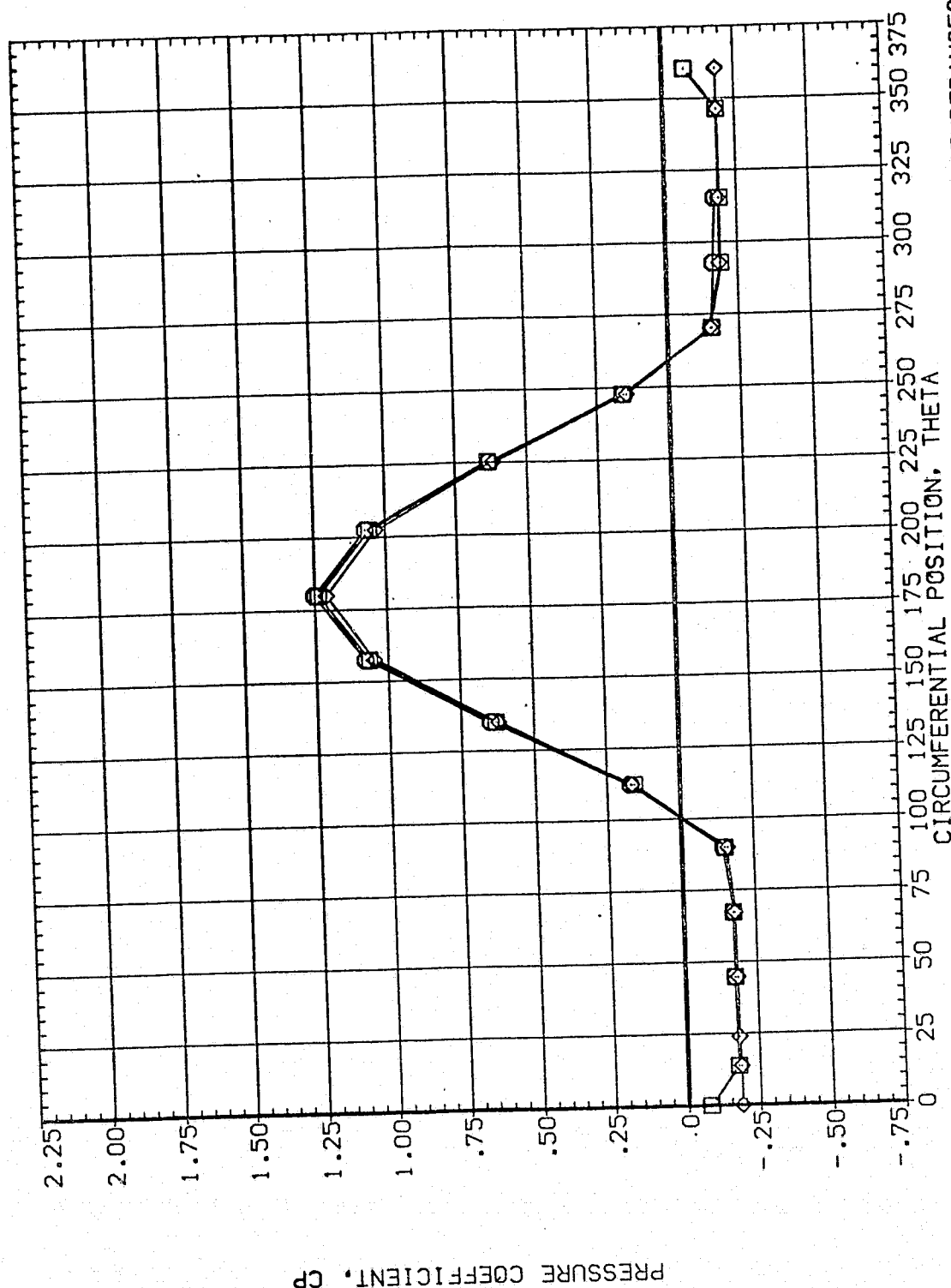


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
				MOUNT	PHI	.000
	.892	60.130	1.970			
	.923					
	.954					

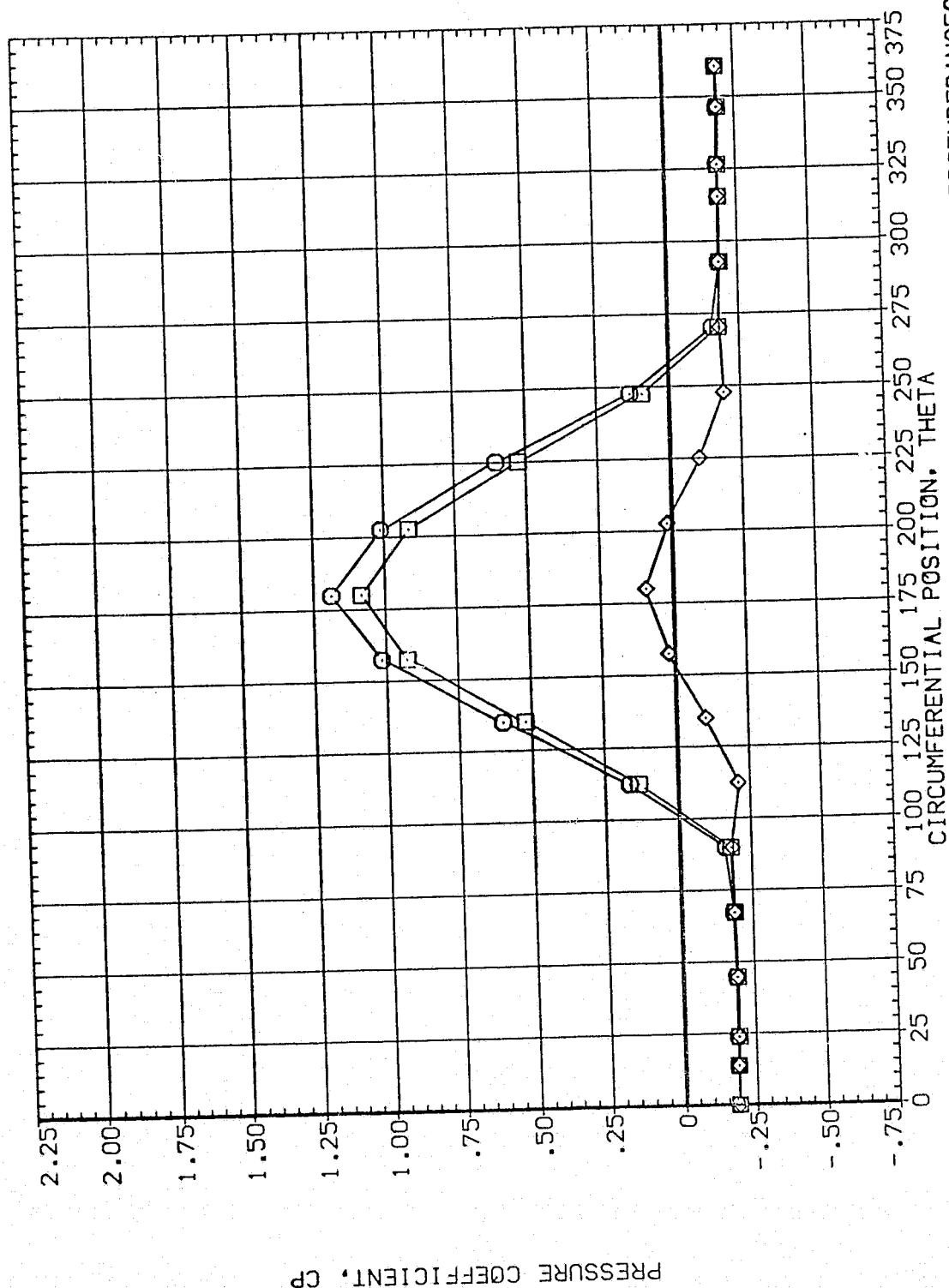


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	63.130	1.960	HQUNT	.000	60.000
□	.108				2.000	
◇	.162					.000

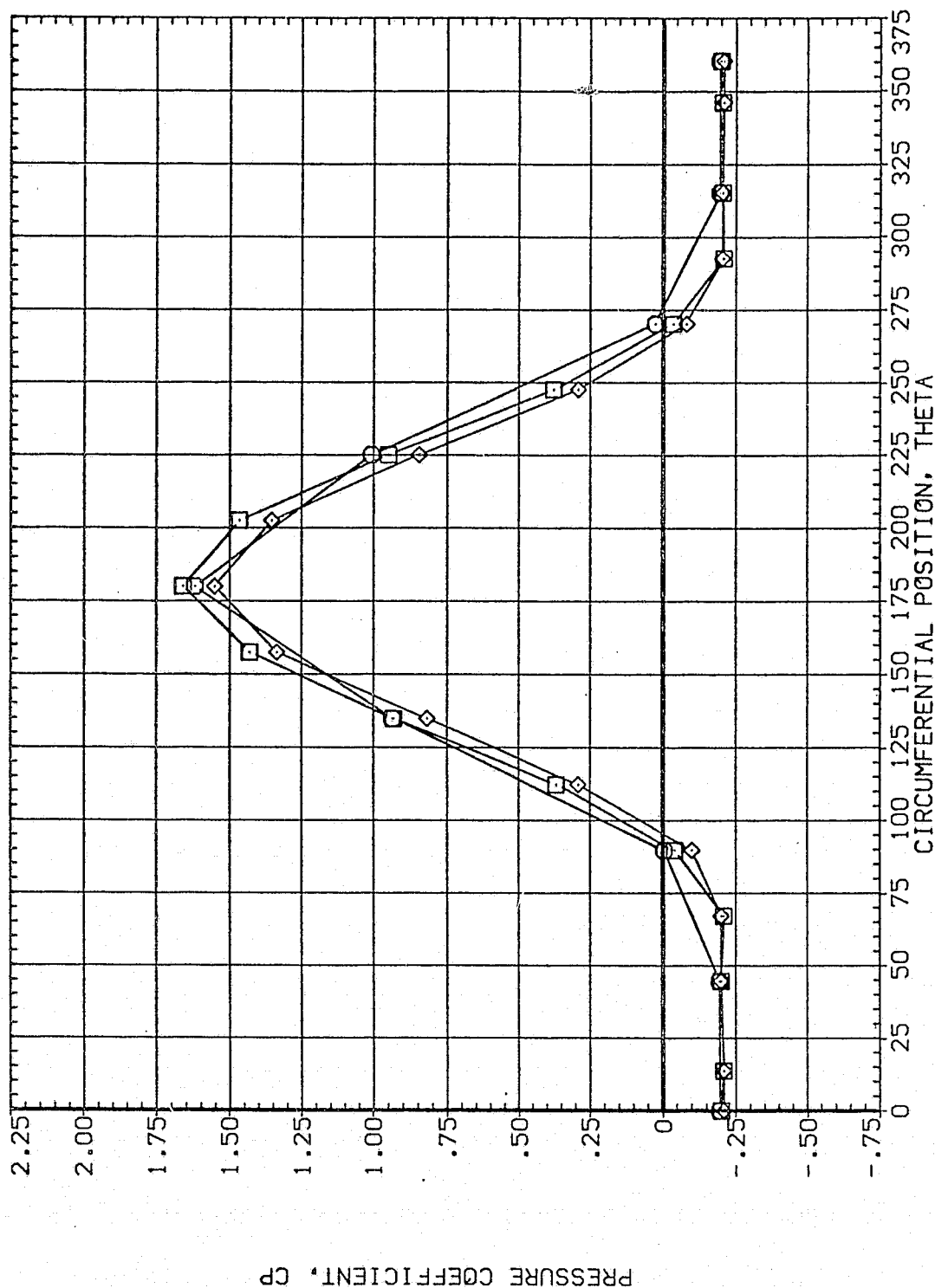


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
	.216	74.860	3.480	BETA	80.000	OFFSET
	.322			MOUNT	2.000	PHI
	.518					.000

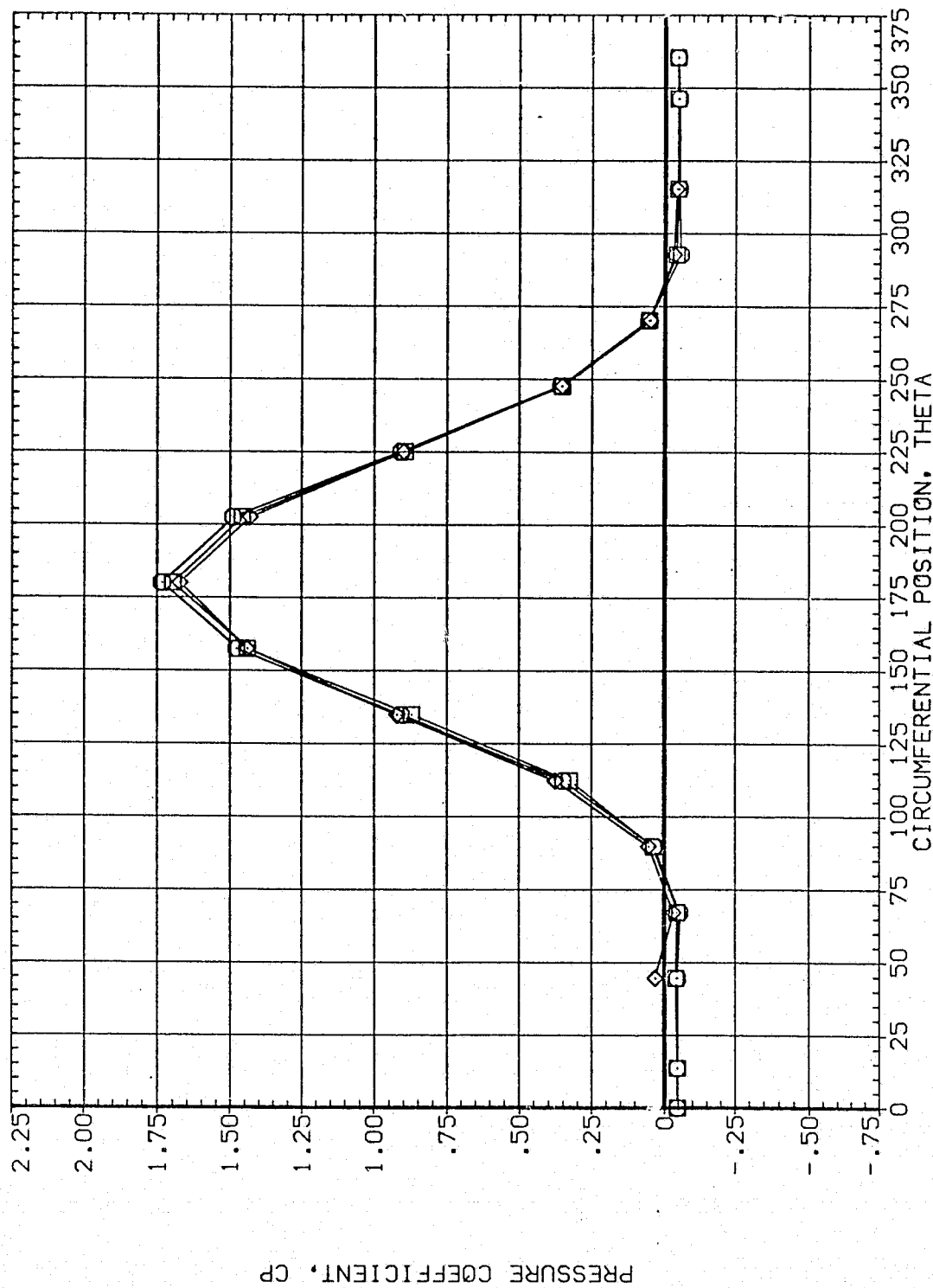


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	63.130	1.960	MOUNT	.000	60.000
□	.735				2.000	
◇	.860					.000

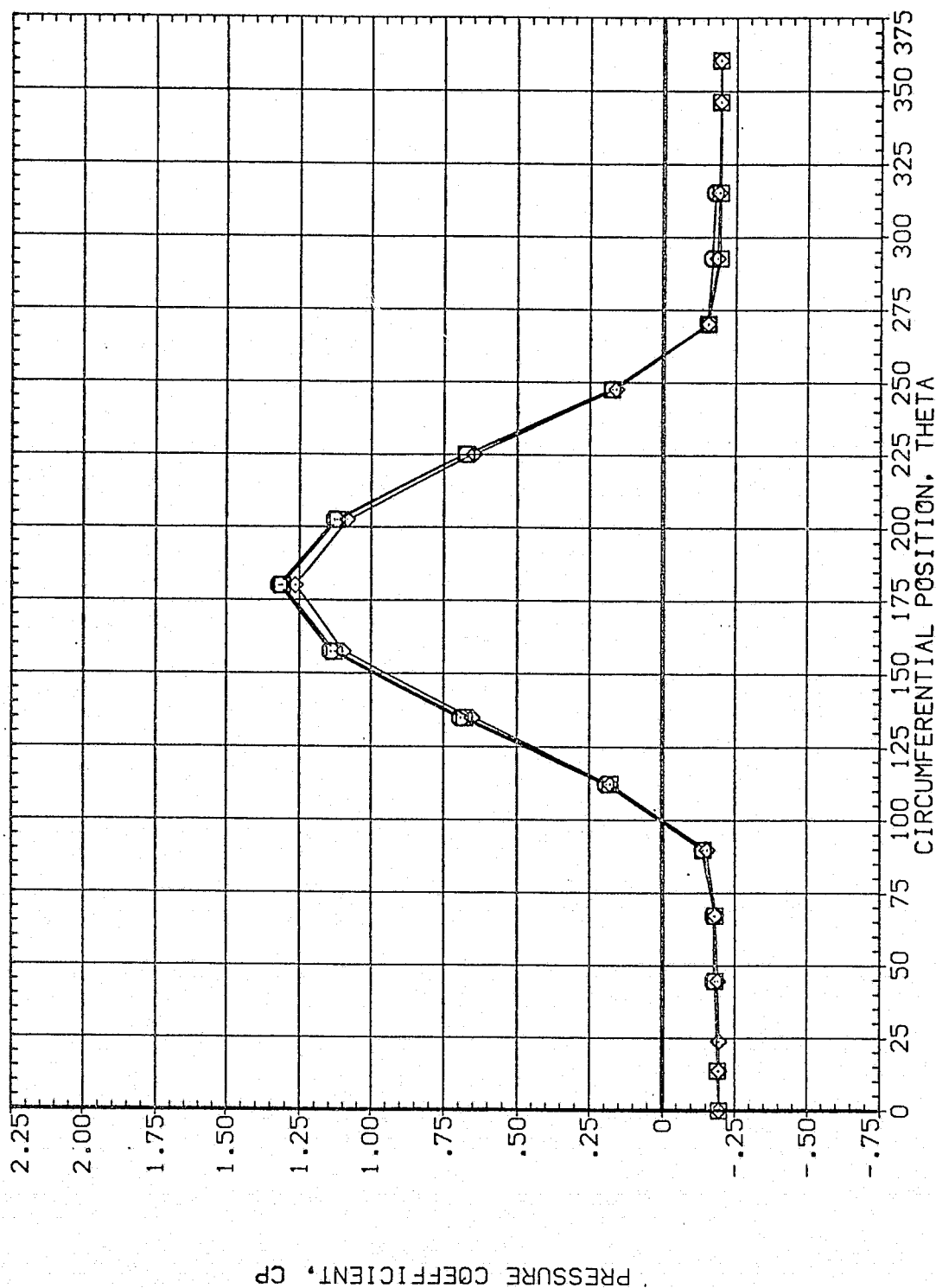


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

(P1A065)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
OFFSET PHI
60.000
.000

SYMBOL X/LB ALPHA MACH
◇ .892 63.130 1.960
□ .923
○ .954

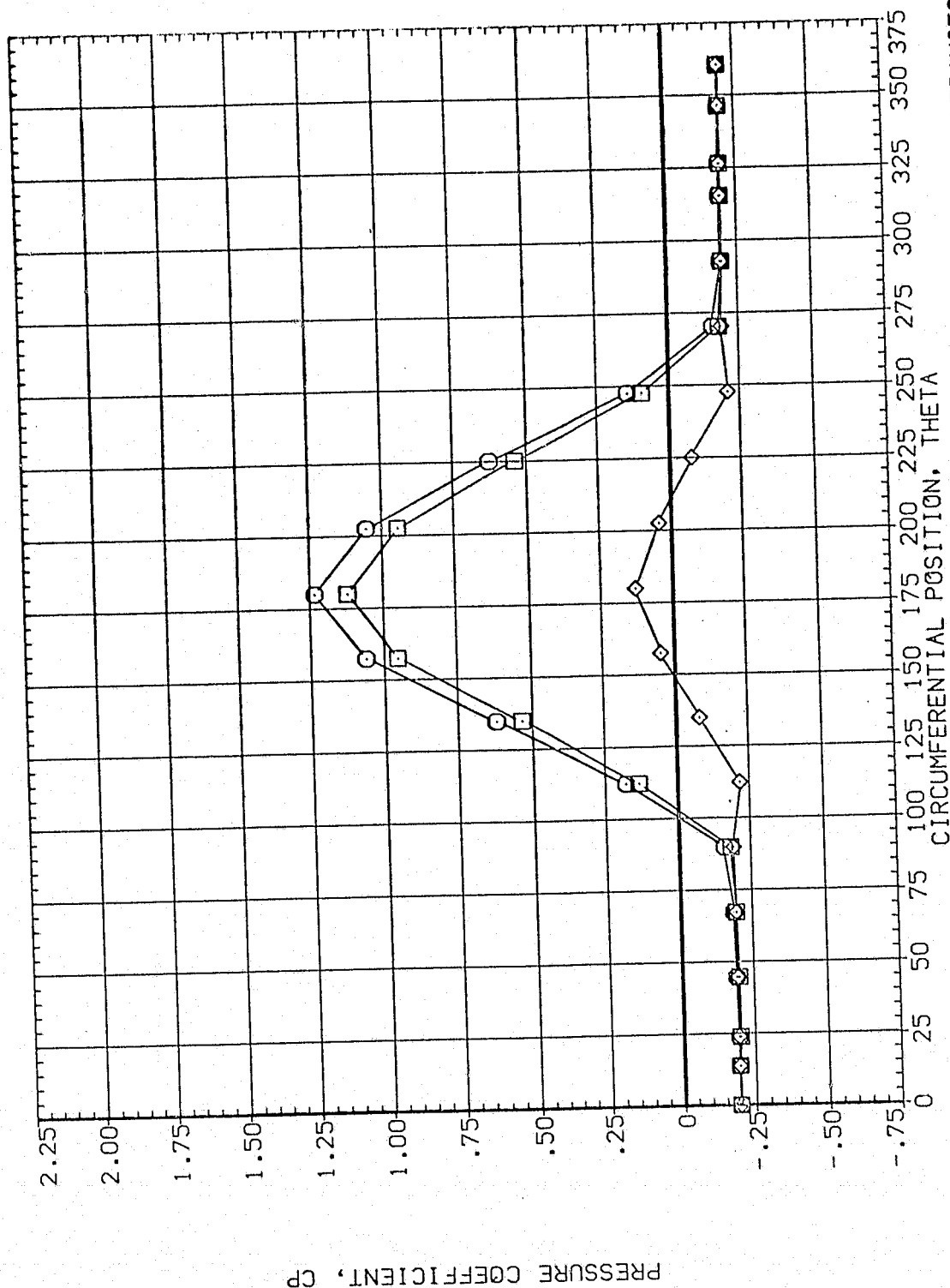


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.055	66.130	1.970	HOUNT	.000	60.000
◇	.108				2.000	.000
◇	.162					

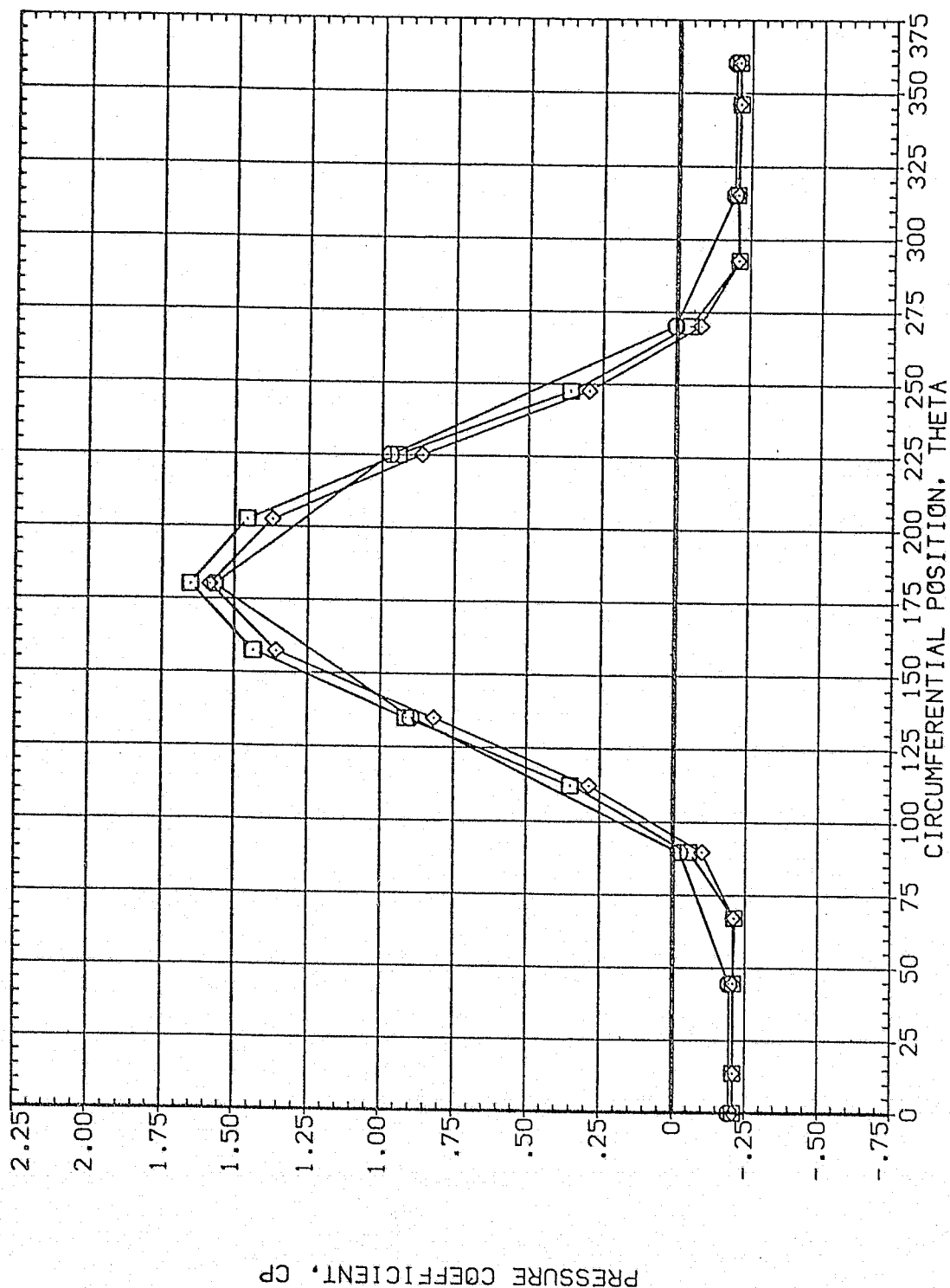


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

PAGE 2461

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A066)

SYMBOL X/LB ALPHA MACH
 ○ .216 66.130 1.970
 □ .322
 ◇ .518

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 60.000
 .000

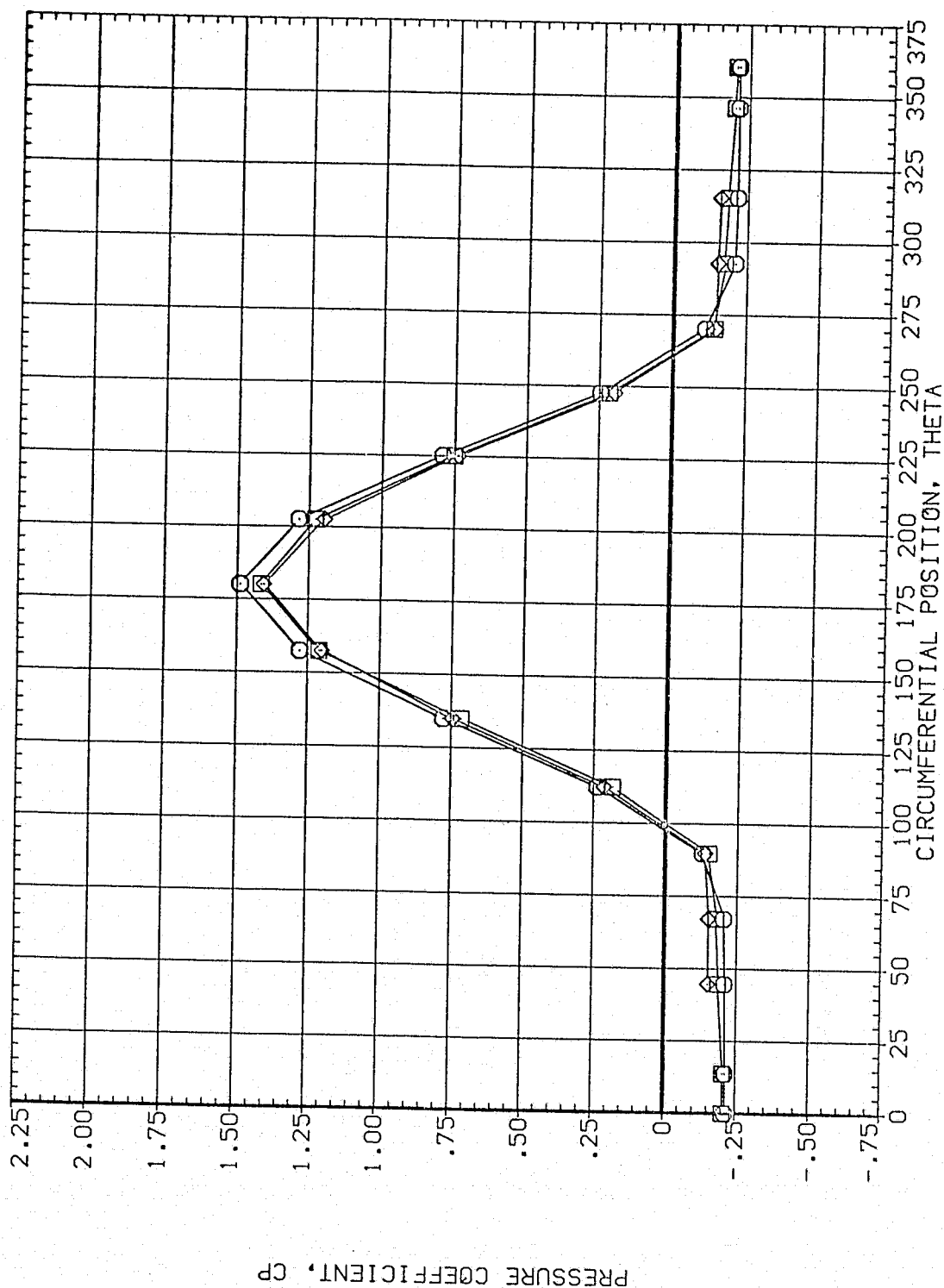


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	66.130	1.970	.000	.000	60.000
□	.735			2.000		.000
◇	.860					

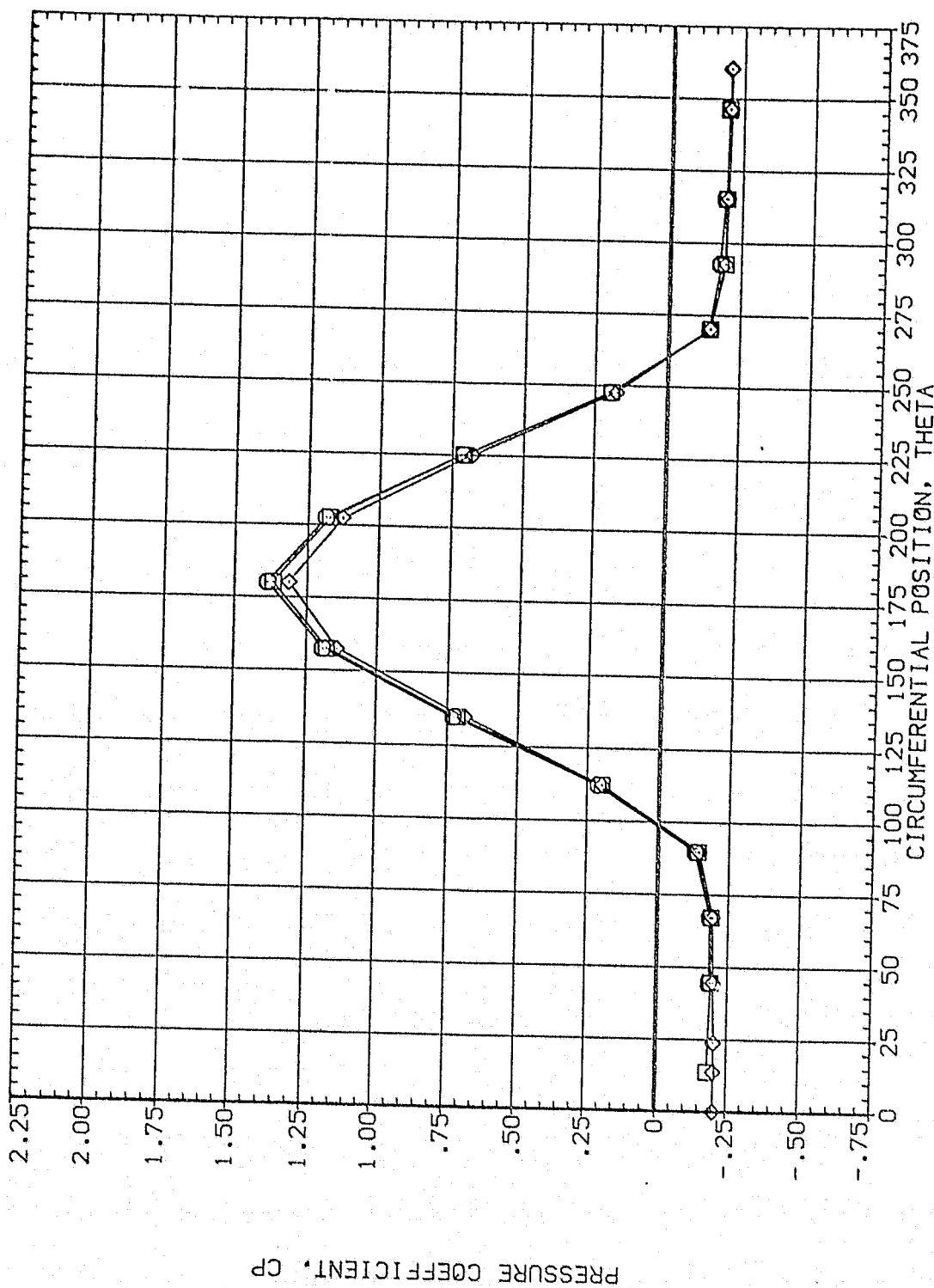


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES			
				BETA	.000	OFFSET	50.000
				HOUNT	2.000	PHI	.000

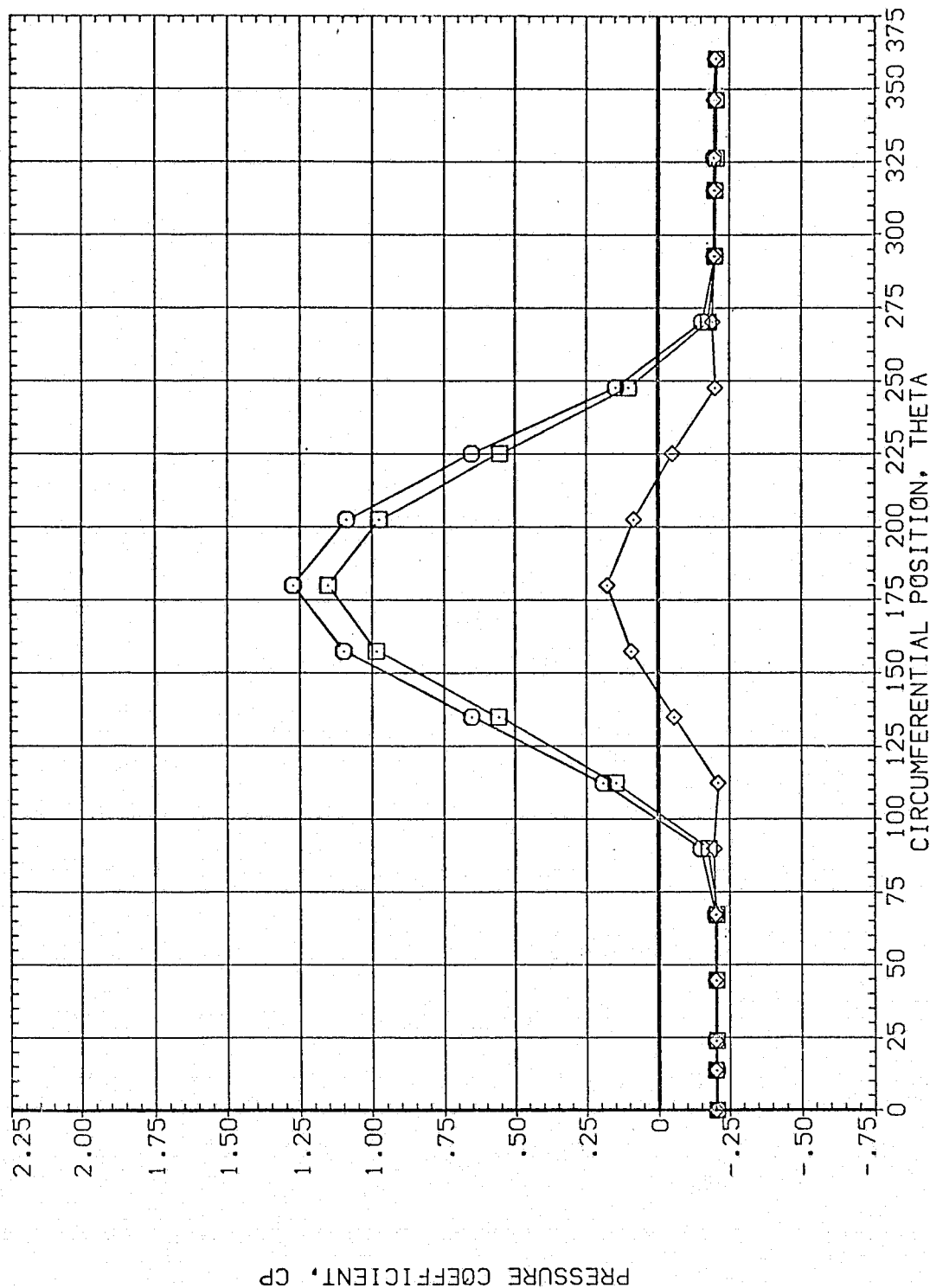


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA MOUNT	OFFSET PHI	50.000 .000
○	.055	69.130	1.970			
□	.108					
◇	.162					

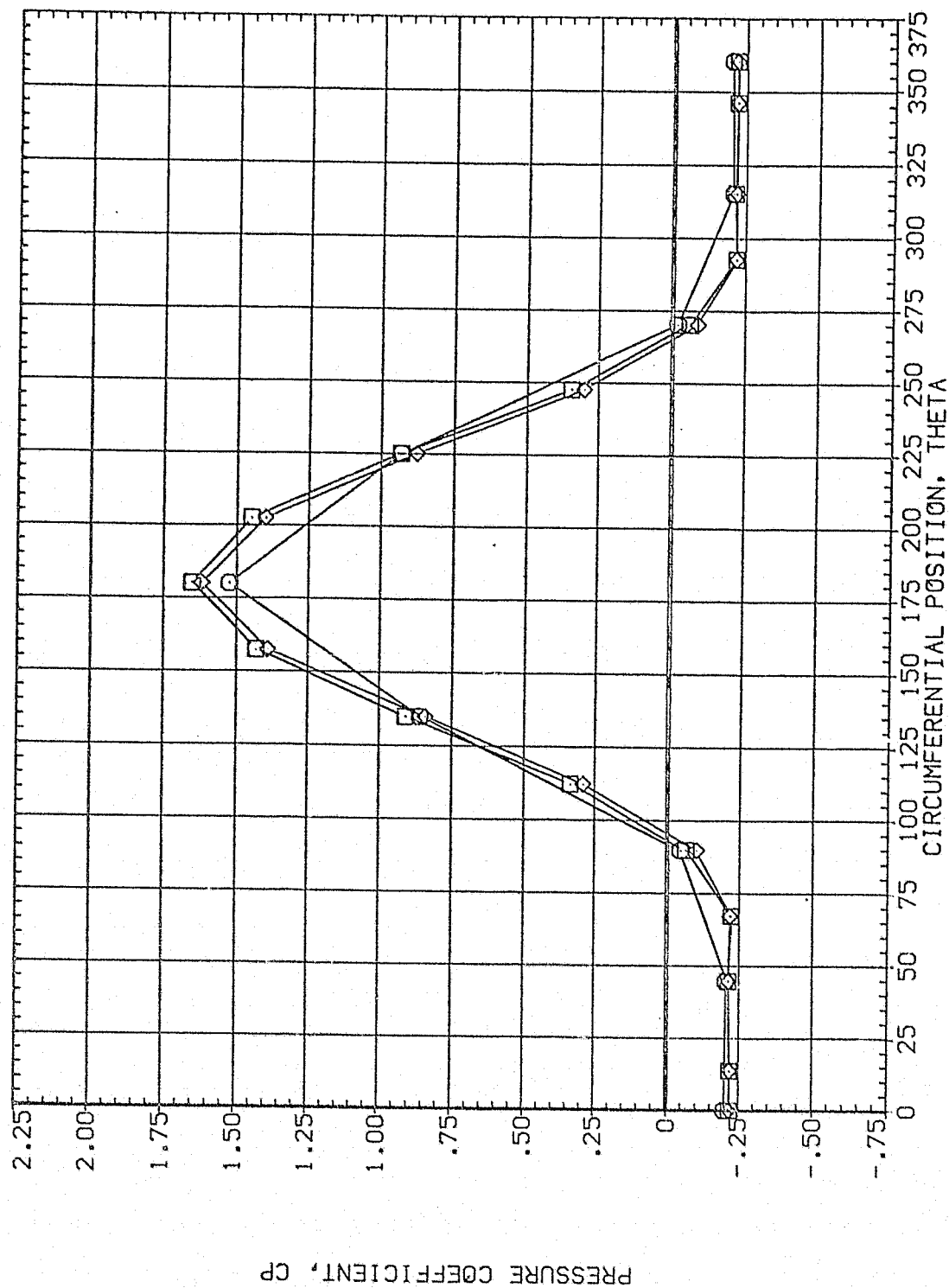


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL X/LB ALPHA 69.130 MACH 1.970
 □ .216
 ◇ .322
 ◇ .518

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI .000
 60.000
 .000

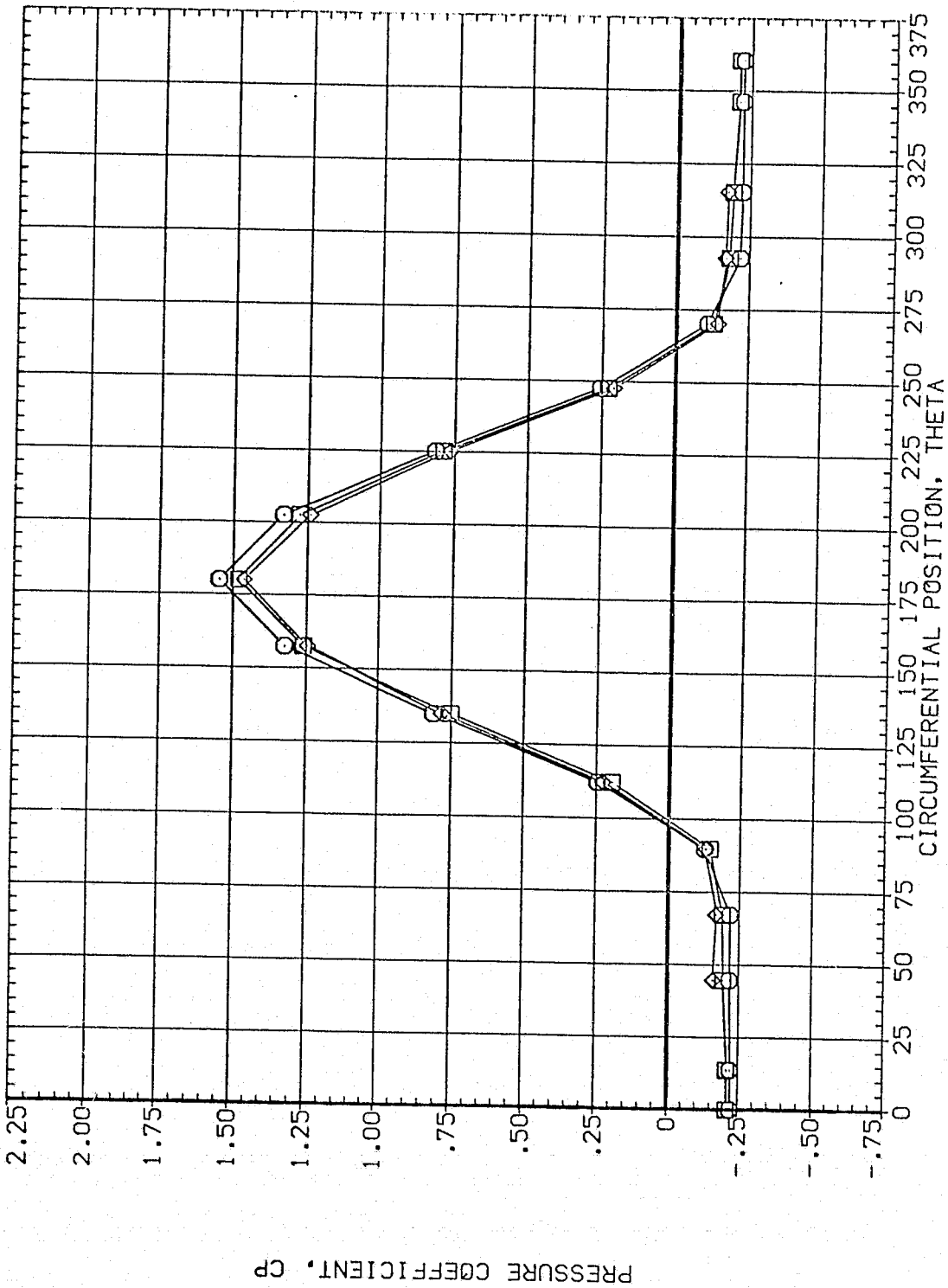


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2466

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	69.130	1.970	MOUNT	.000	60.000
□	.735				2.000	
◇	.860					.000

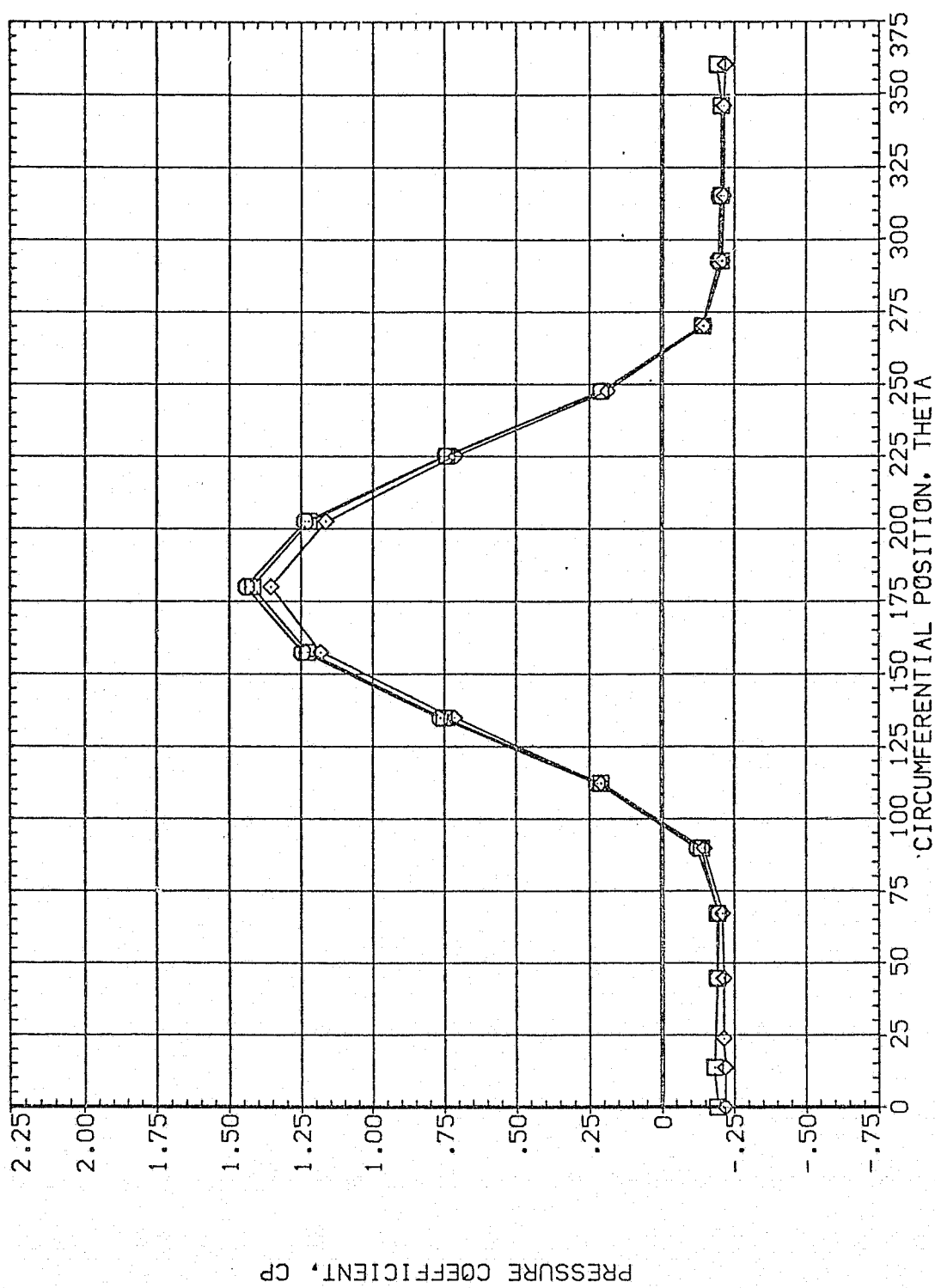


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A067)

SYMBOL

X/LB

ALPHA

MACH

.892

69.130

1.970

○

□

◇

.923

.954

PARAMETRIC VALUES

BETA

2.000

OFFSET

60.000

PHI

.000

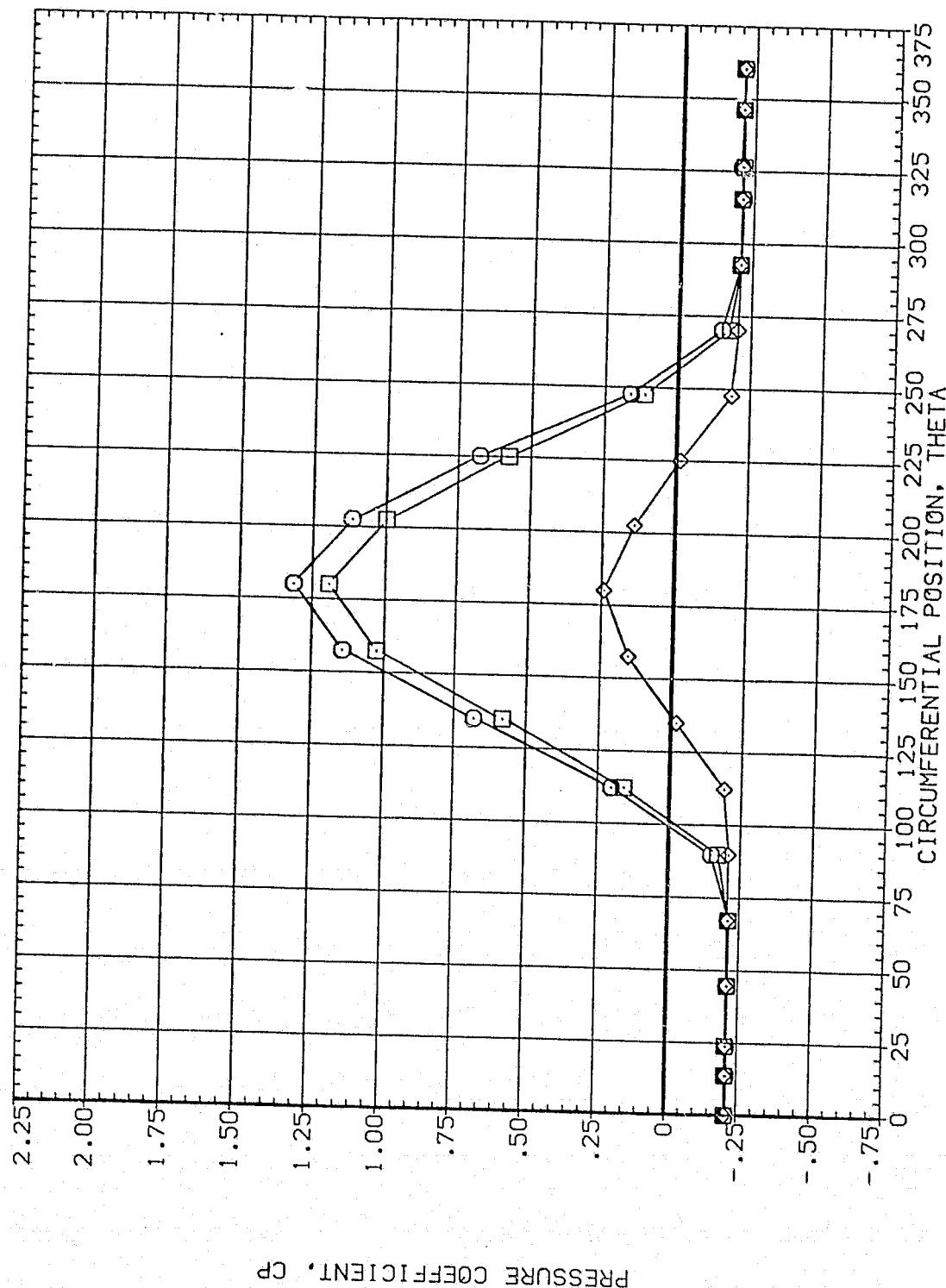


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	80.000
○	.055	69.960	1.960	HOUNT	PHI	.000
□	.108					
◇	.162					

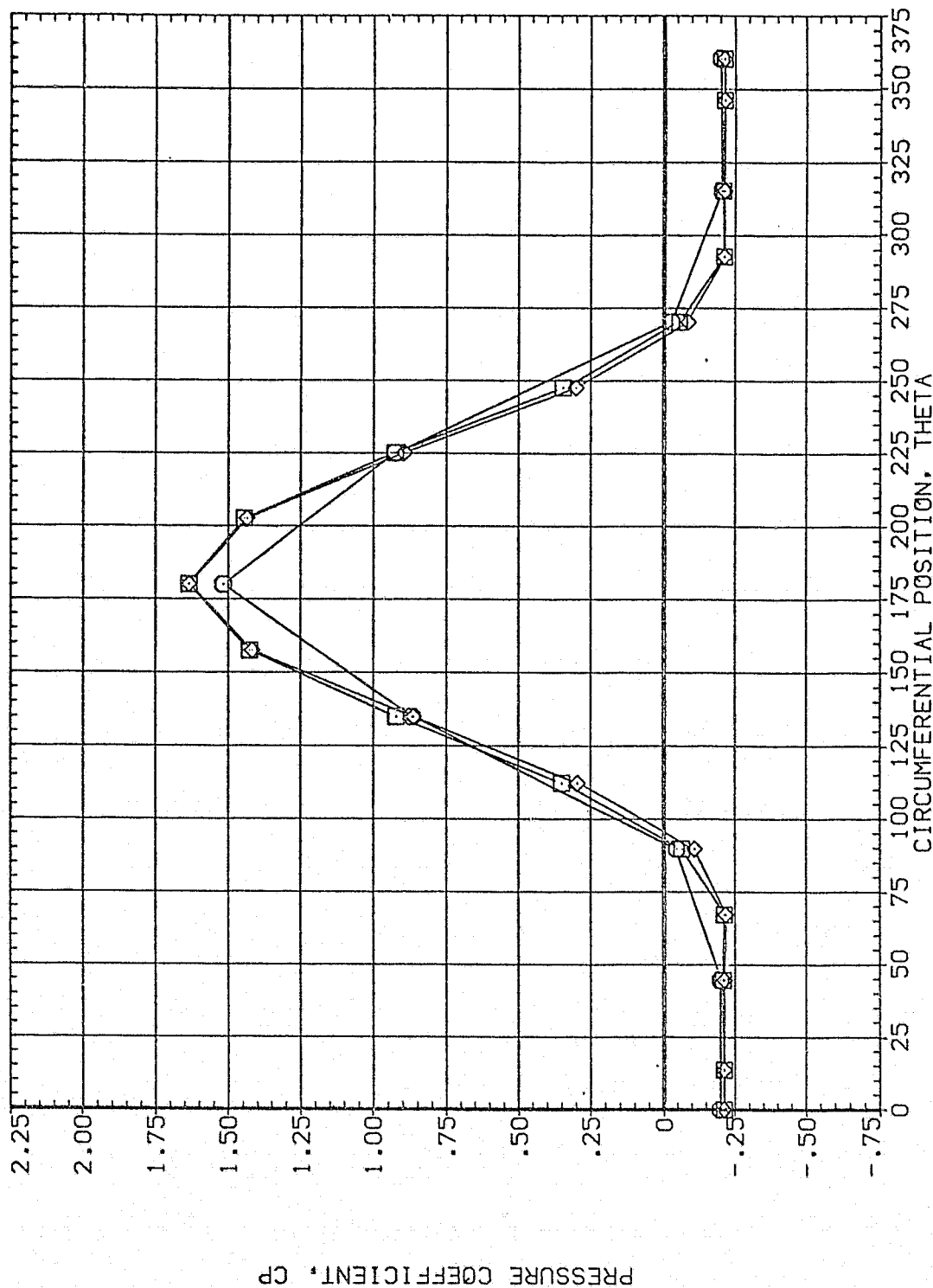


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.216	89.960	1.960	MOUNT	.000 OFFSET
□	.322				2.000 PHI
◇	.518				.000

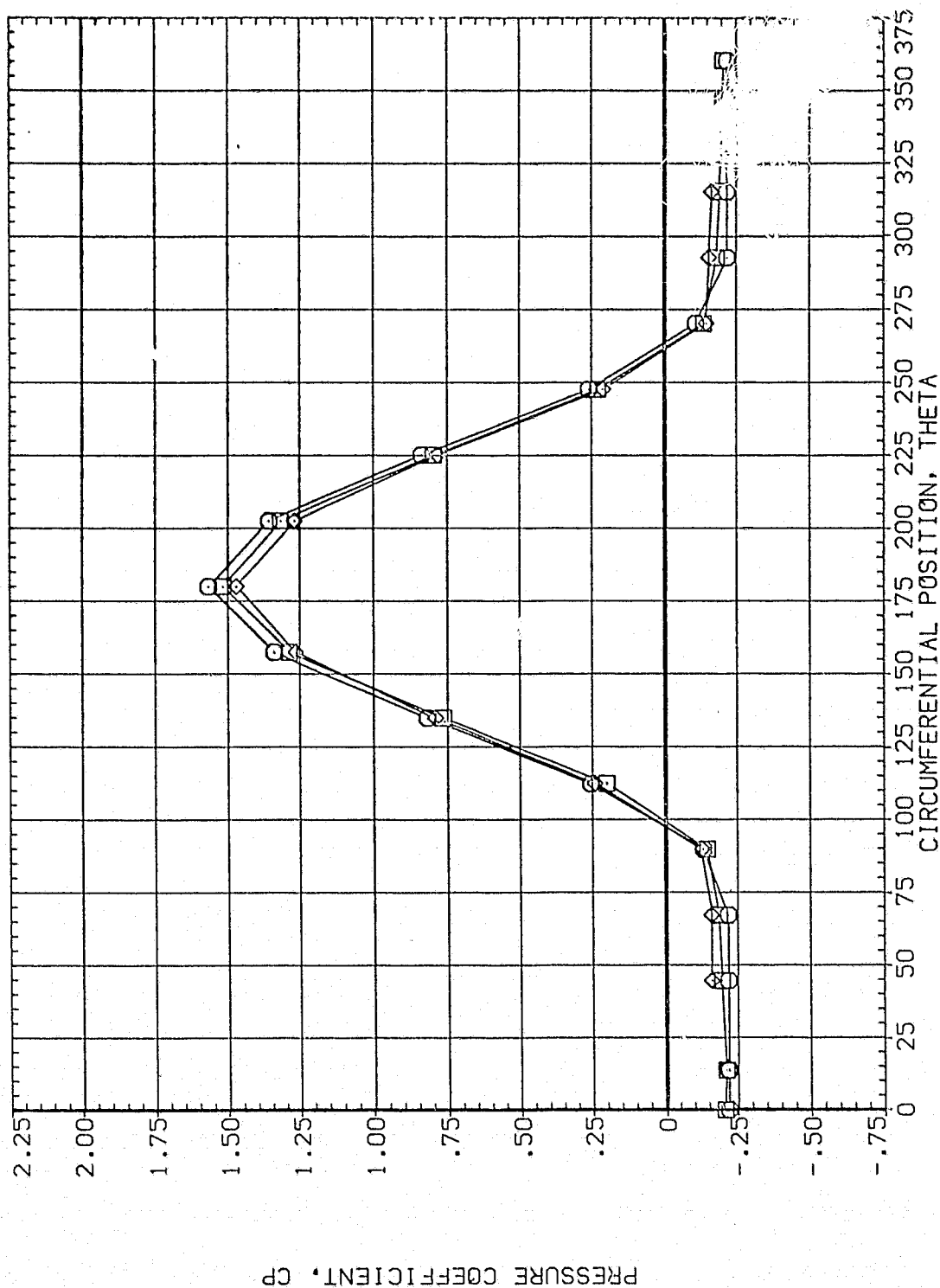


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.610	69.960	1.960	MOUNT	.000 OFFSET
□	.735				2.000 PHI
◇	.860				80.000
					.000

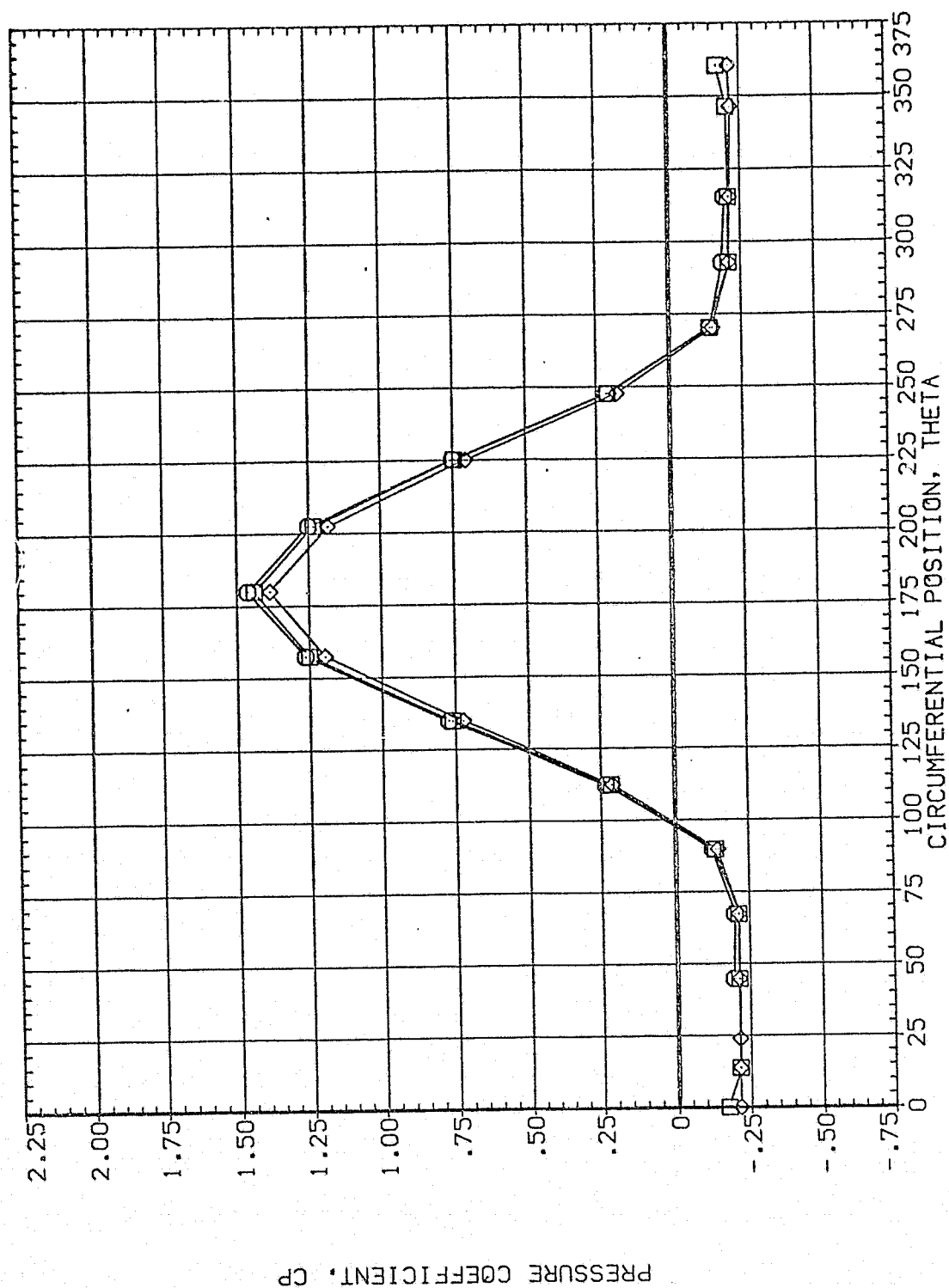


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A068)

SYMBOL
 ○
 □
 ◇

X/LB .892
 .923
 .954
 ALPHA 69.960
 MACH 1.960

PARAMETRIC VALUES
 BETA .000
 HOUNT 2.000
 OFFSET .000
 PHI .000

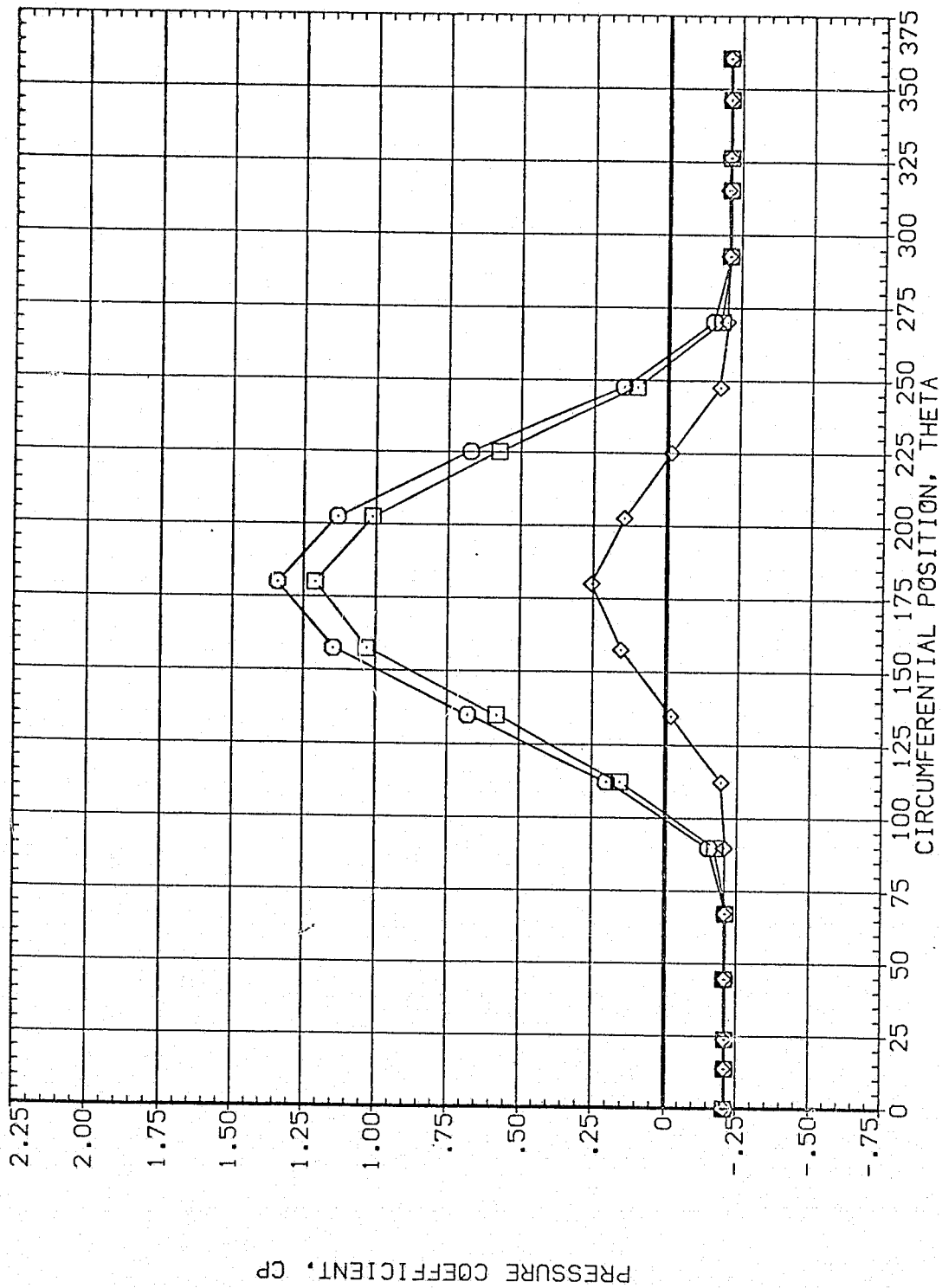


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2. (P1A069)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.055	71.880	1.960	MOUNT	.000	80.000
◇	.108				2.000	.000
◇	.162					

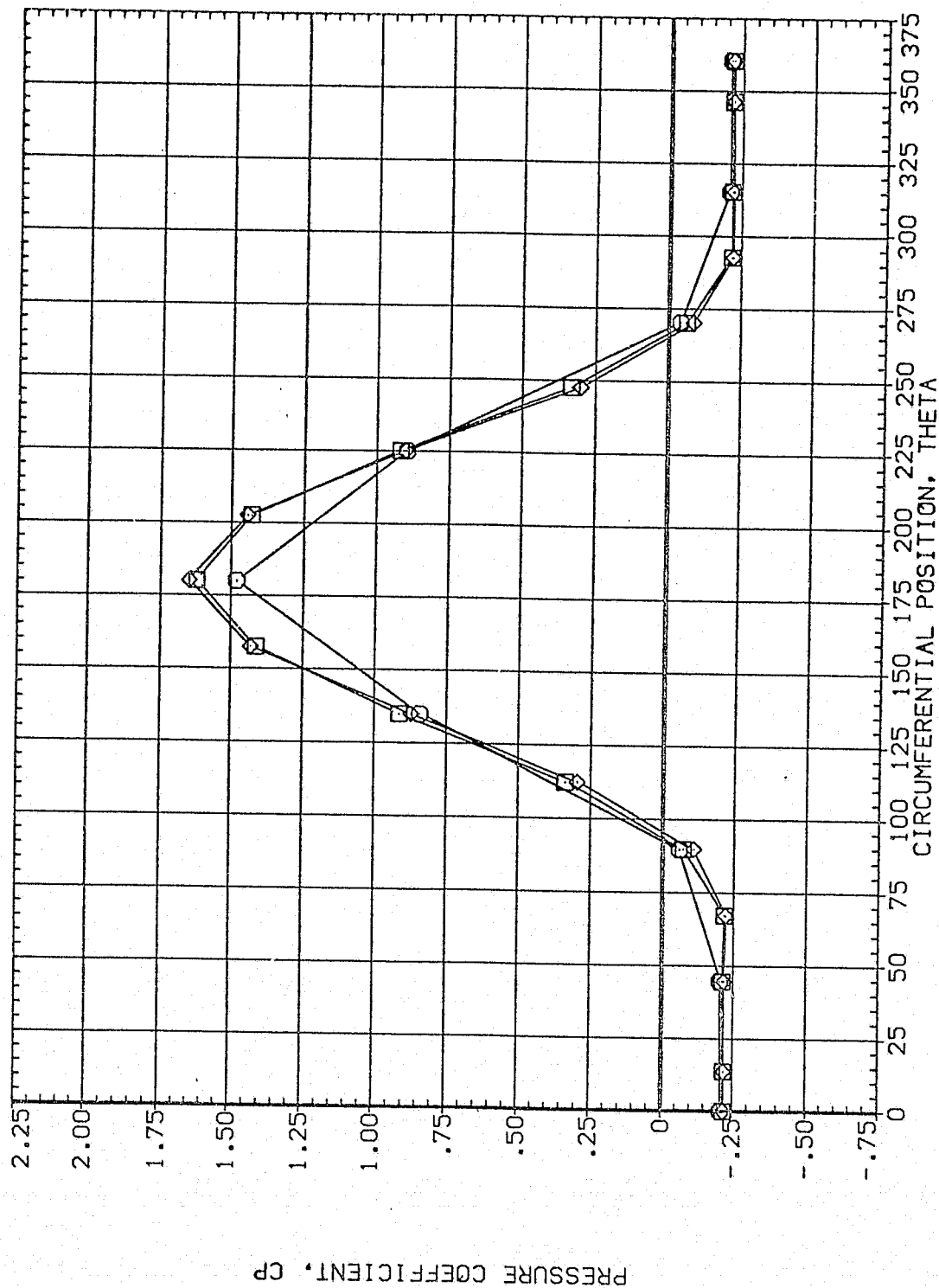


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.216	71.880	1.960	MOUNT	.000
□	.322			OFFSET	2.000
◇	.518			PHI	.000

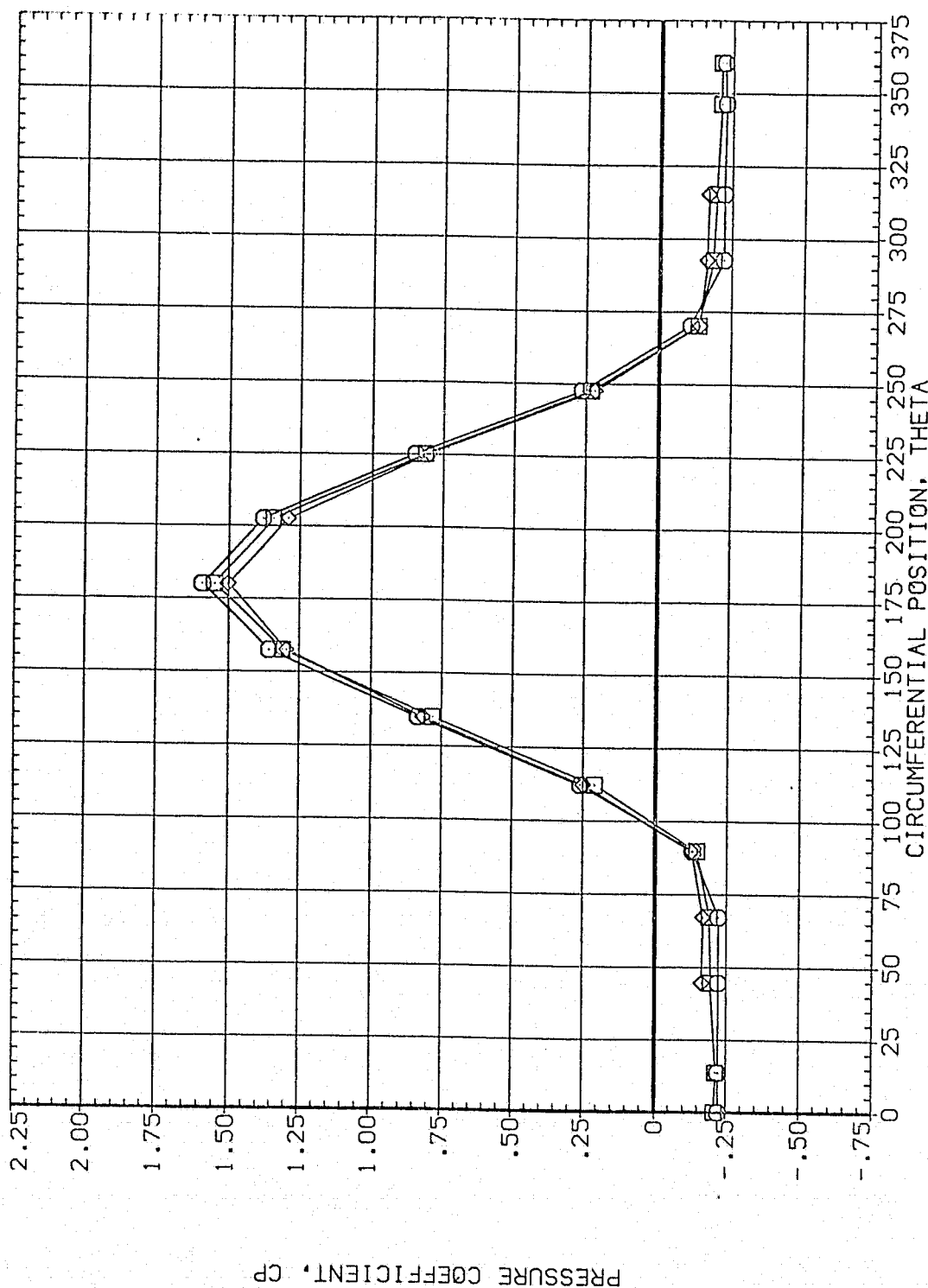


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA069)

SYMBOL

X/LB
.610
.735
.860

ALPHA
71.880

MACH
1.960

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
OFFSET
PHI
80.000
.000

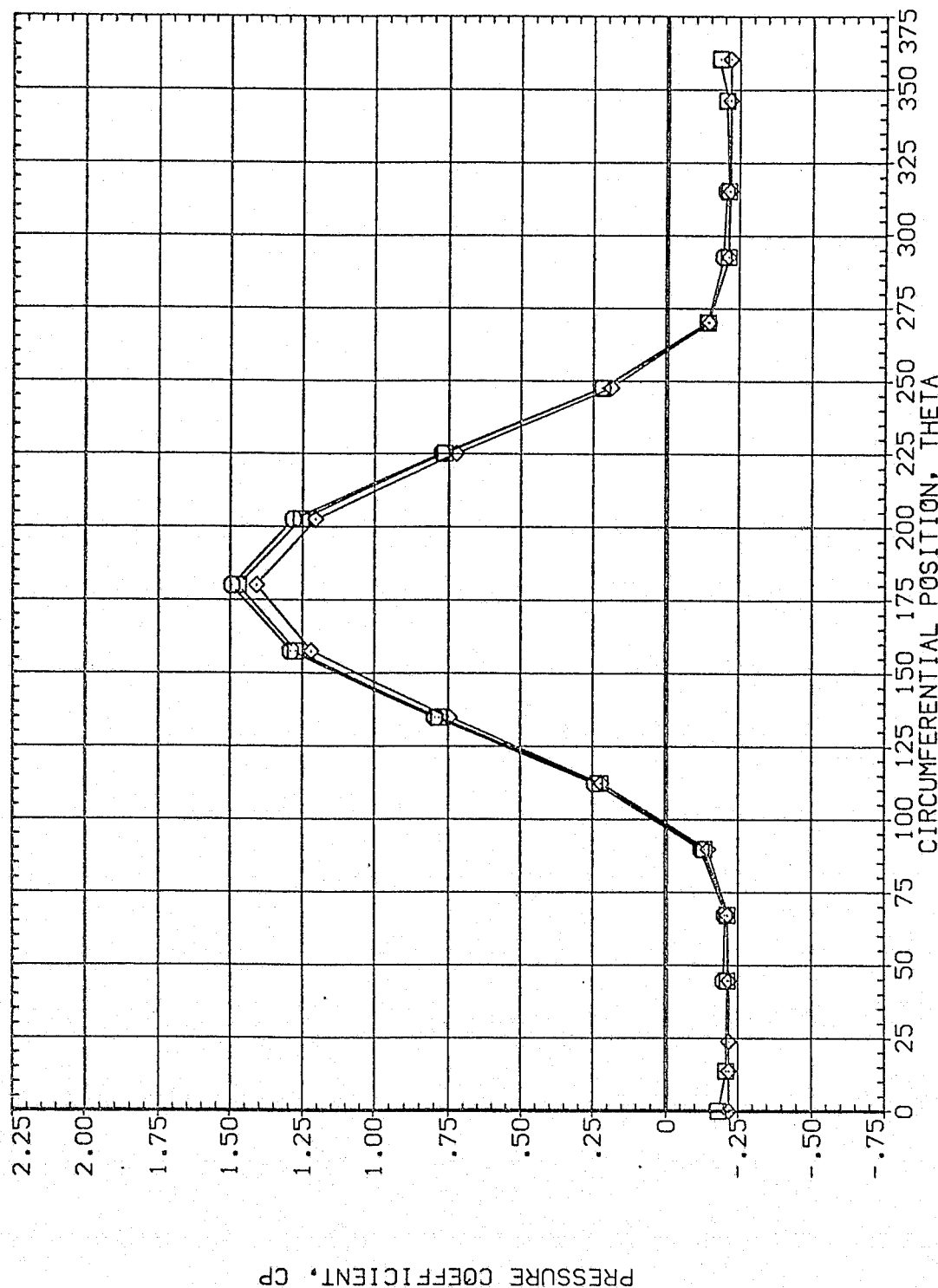


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 .000 .000 80.000
 .000 .000 .000

BETA
 MOUNT

SYMBOL X/LB ALPHA MACH
 .892 71.880 1.960
 .923
 .954

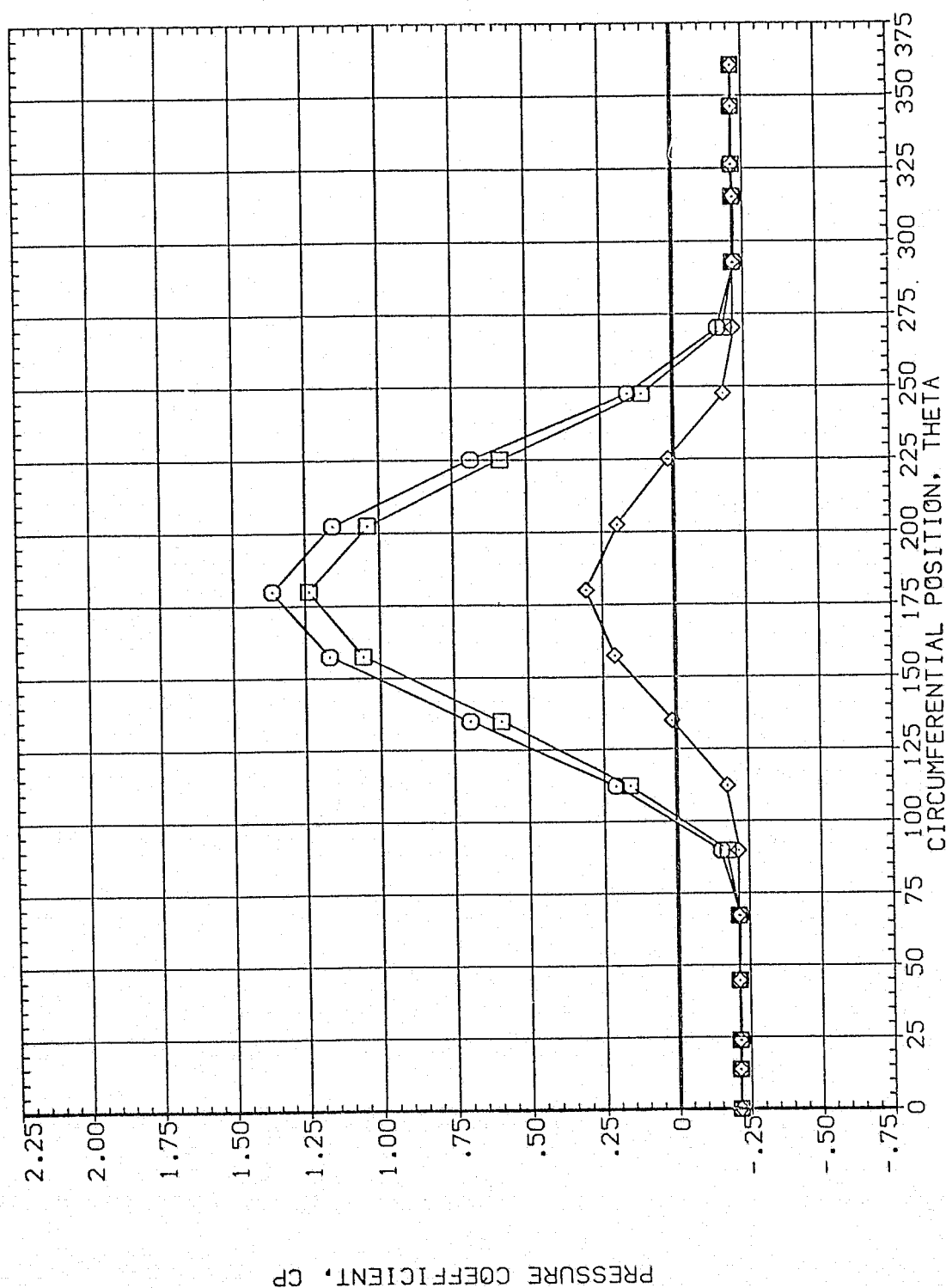


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	74.860	1.960	MOUNT	.000	80.000
□	.108				2.000	.000
◇	.162					

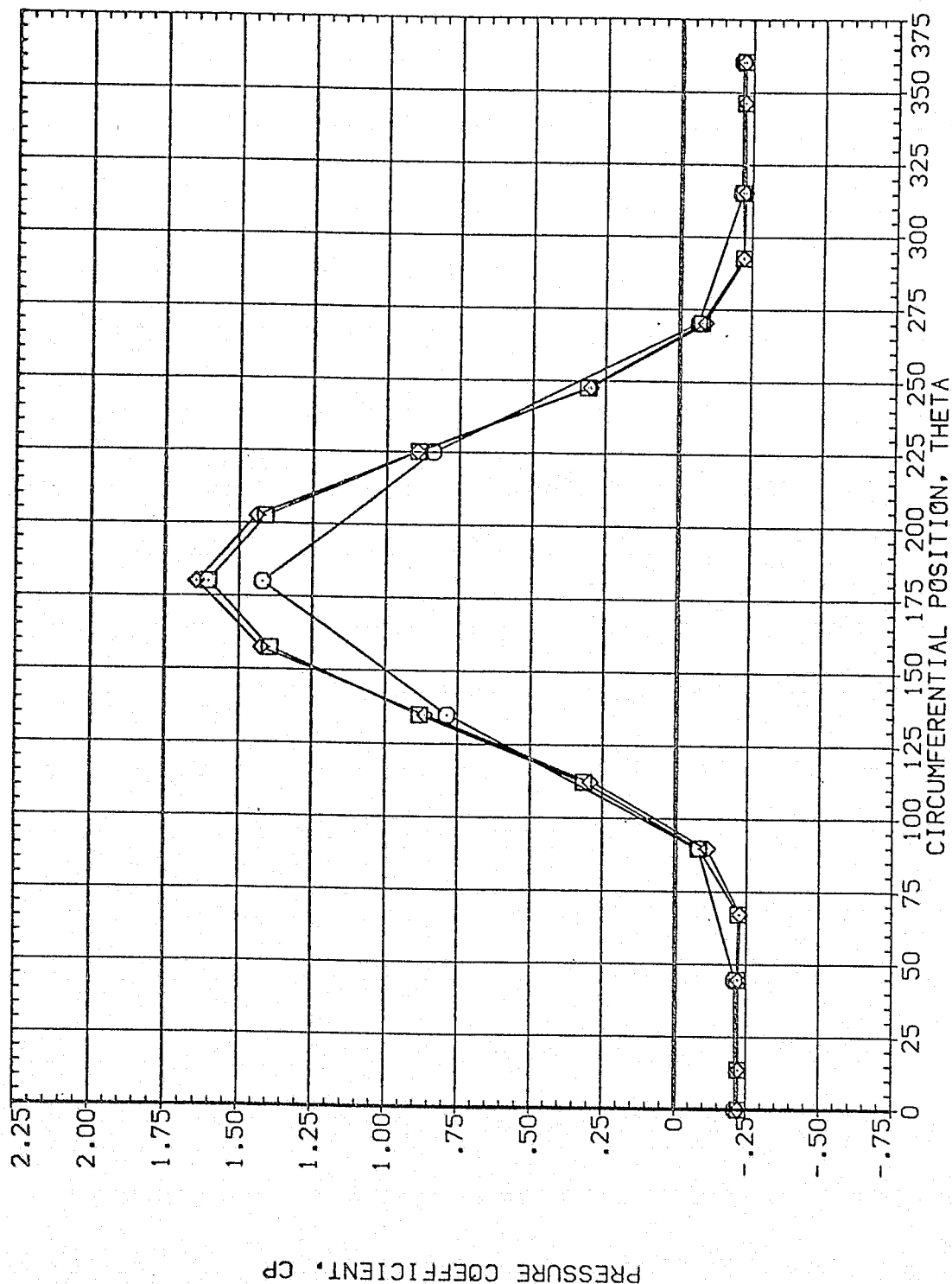


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL X/LB ALPHA MACH
 □ .216 74.860 1.960
 ○ .322
 ◇ .518

PARAMETRIC VALUES
 BETA .000 OFFSET 80.000
 MOUNT 2.000 PHI .000

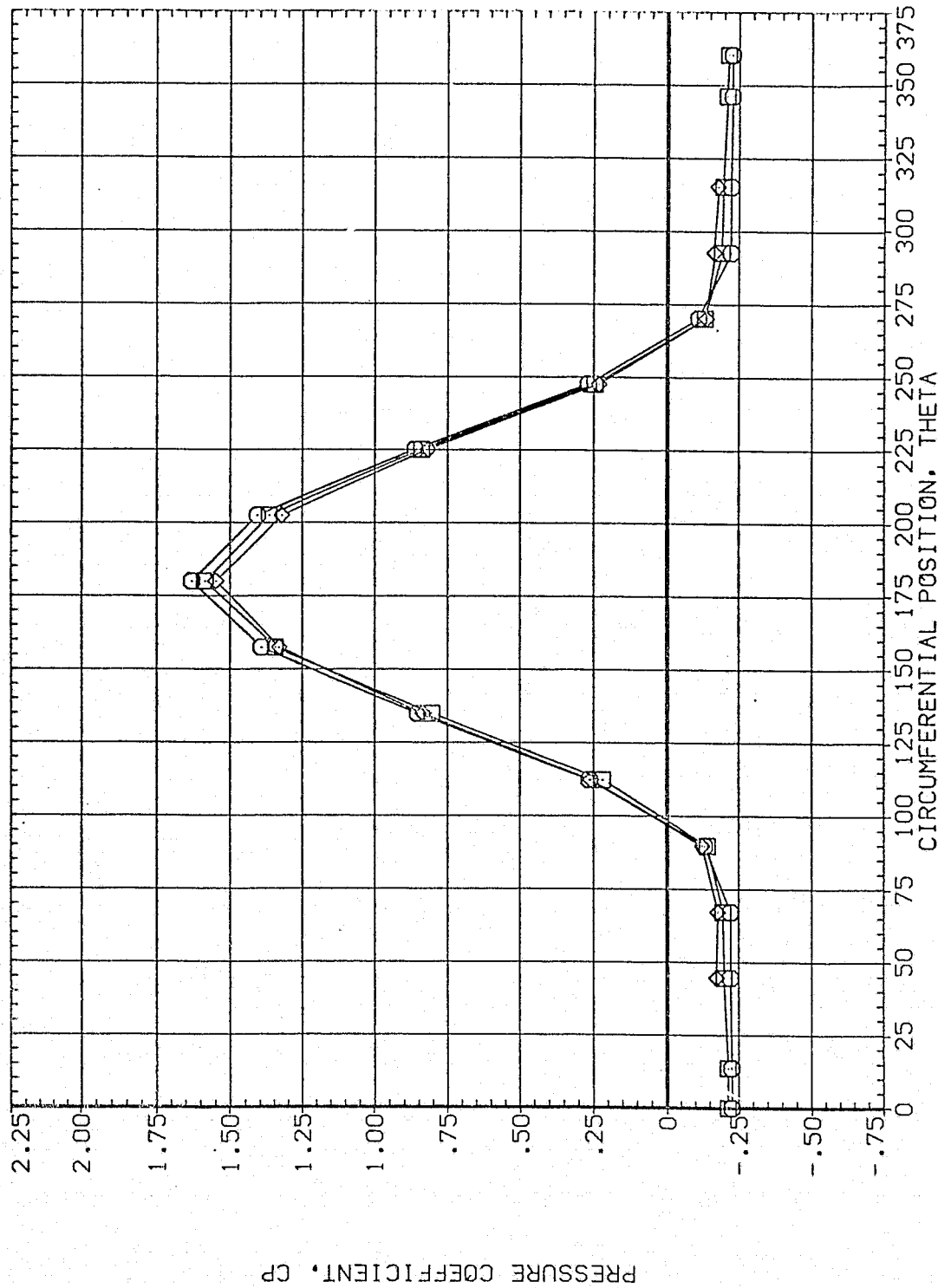


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2478

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	74.860	1.960	HOUNT	.000	80.000
◇	.735				2.000	.000
◇	.860					

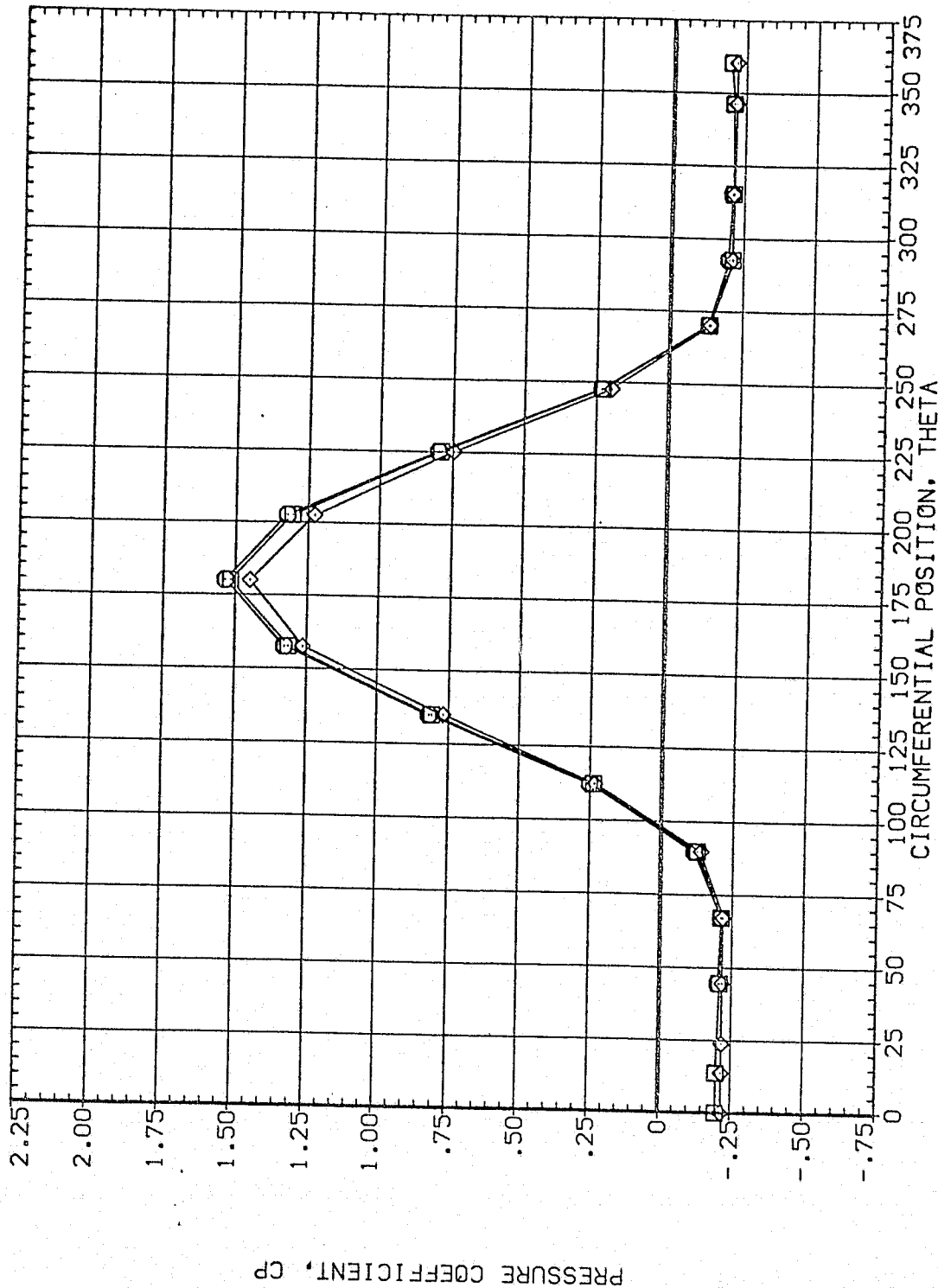


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.892	74.860	1.960	MOUNT	.000 OFFSET
□	.923				2.000 PHI
◇	.954				.000

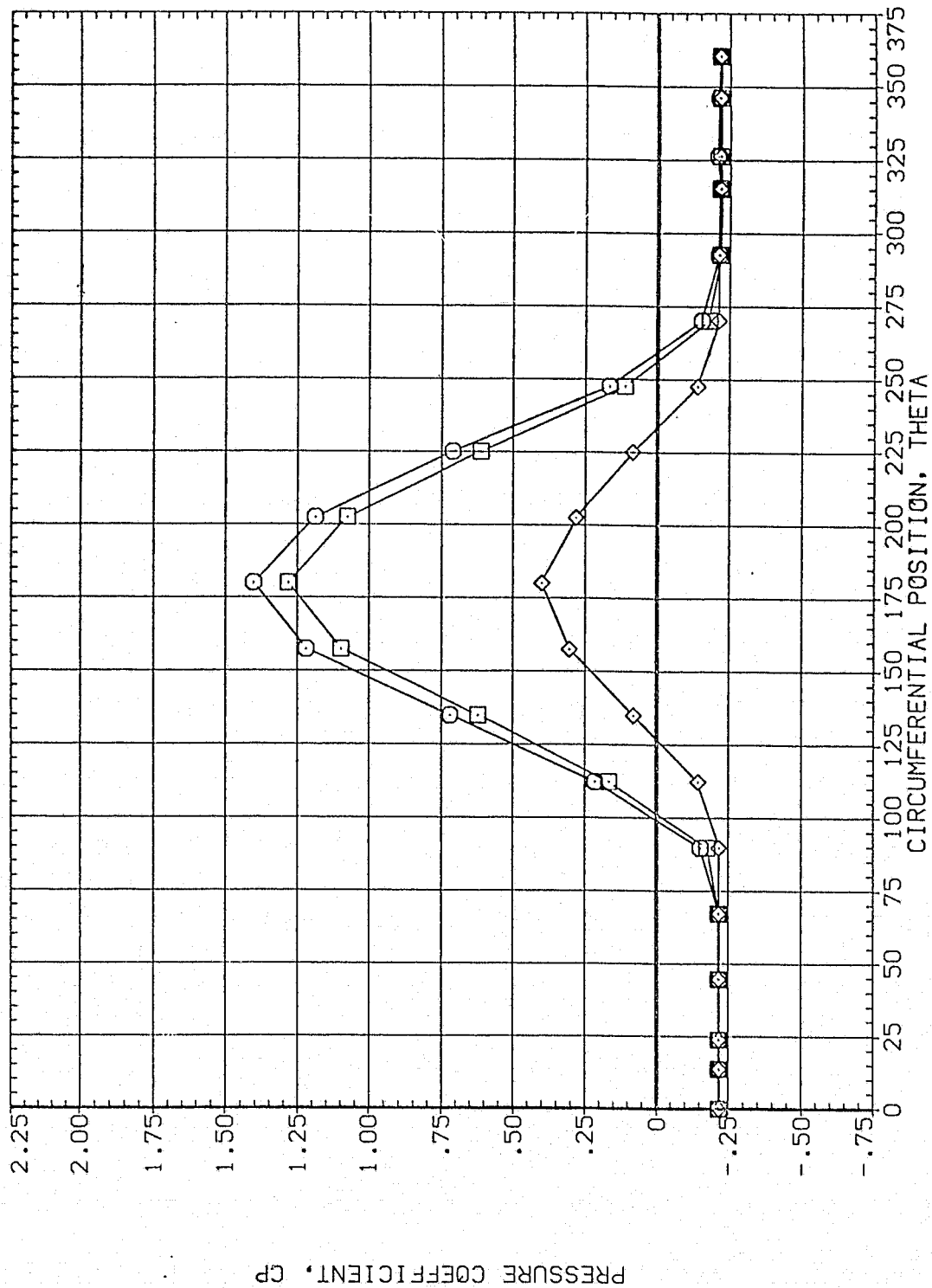


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	.055	77.860	1.960	MOUNT	.000 OFFSET
◇	.108				2.000 PHI
	.162				80.000

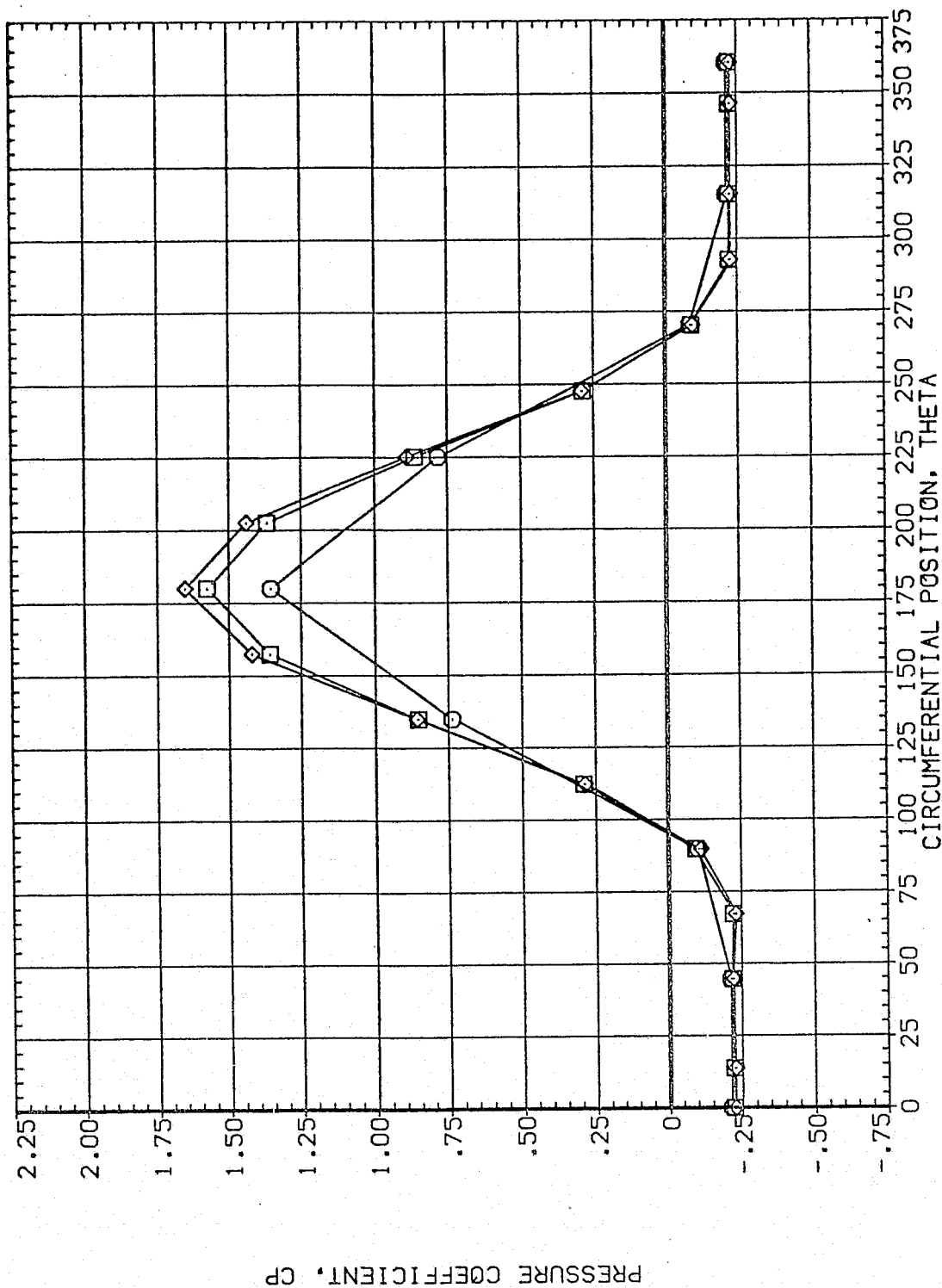


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A071)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	.000	80.000
□	.216	77.860	1.960	HOUNT	2.000	PHI
◇	.322					.000
◇	.518					

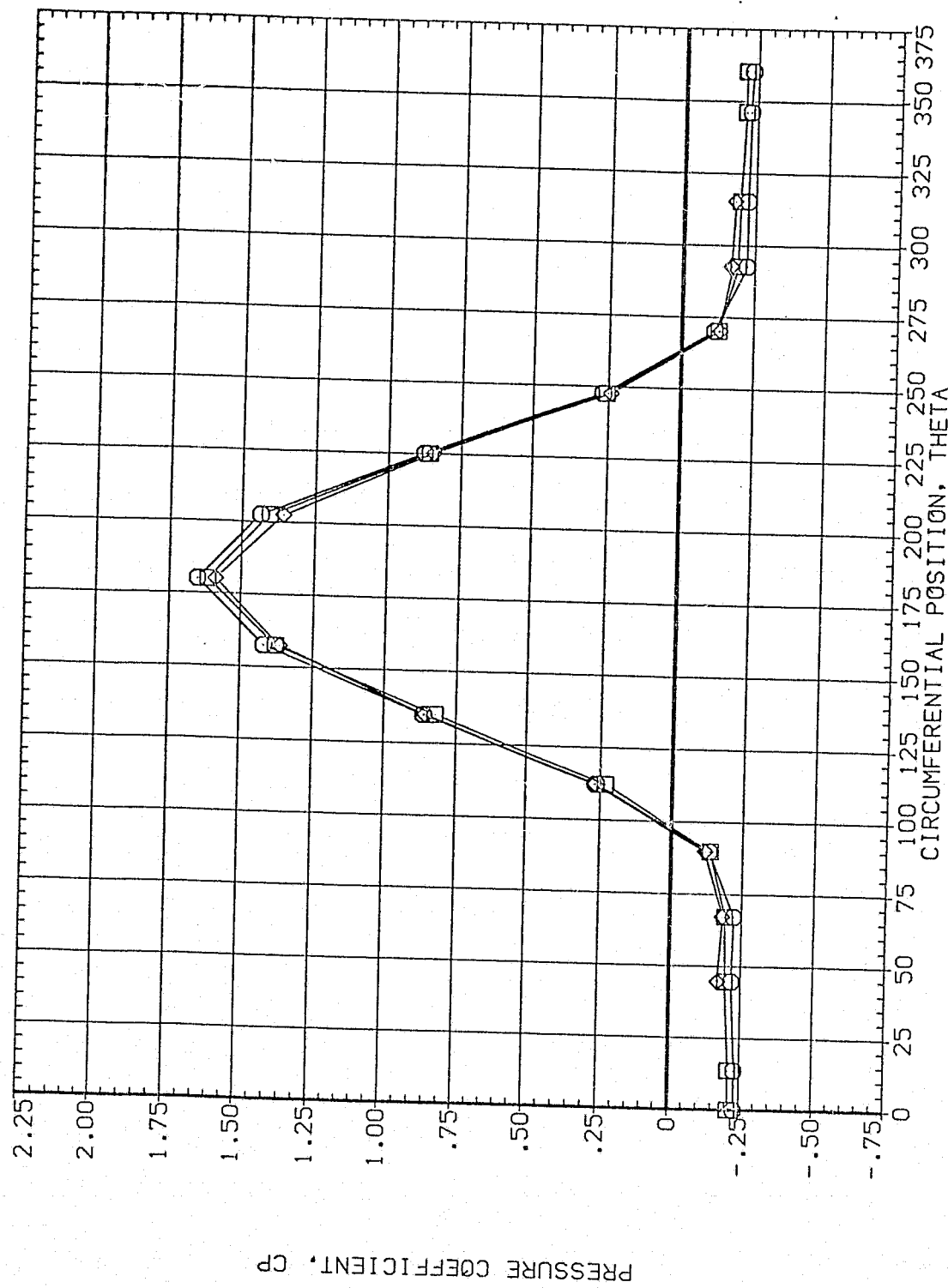


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	77.860	1.960	MOUNT	.000	80.000
□	.735				2.000	
◇	.860					.000

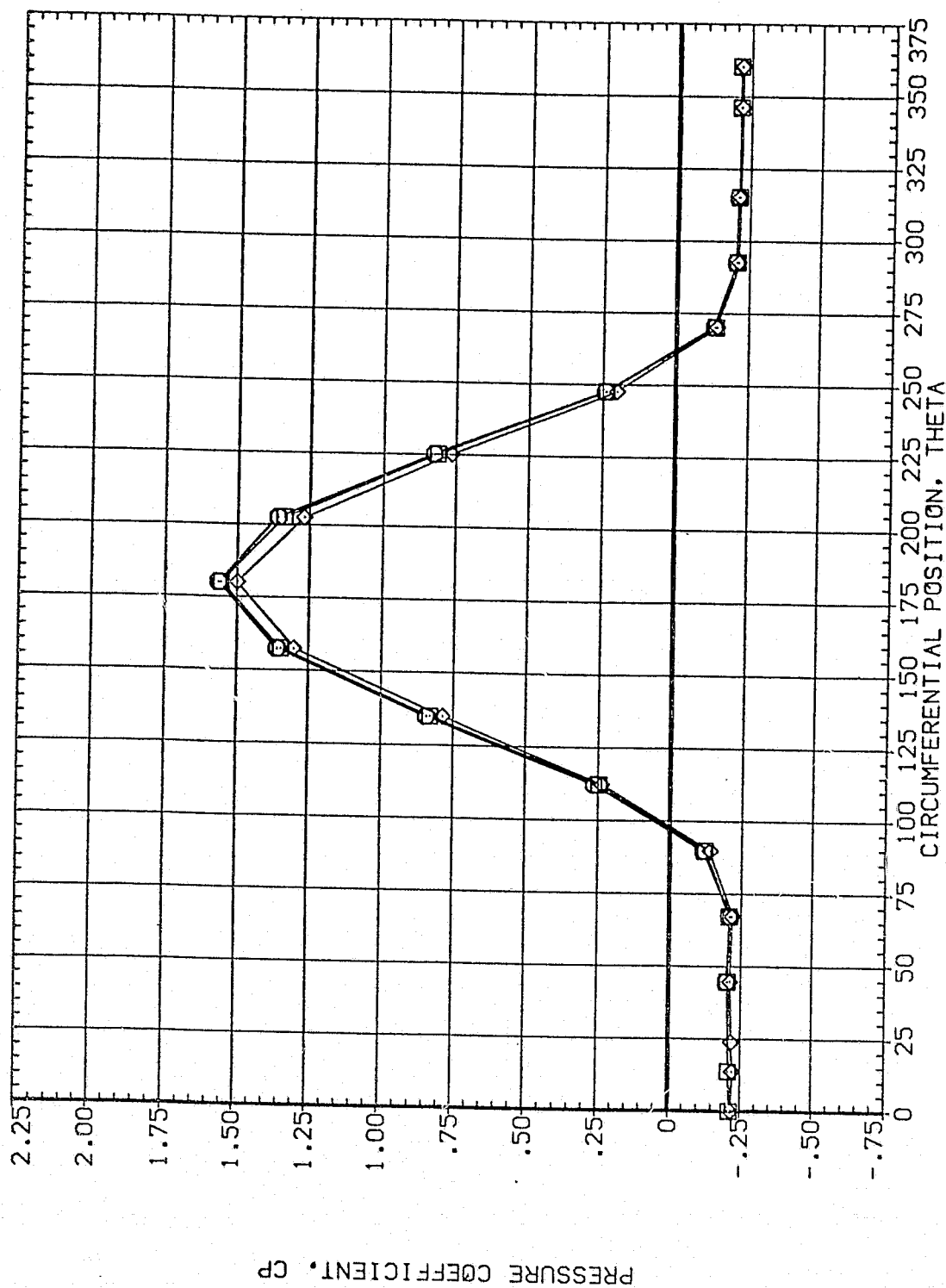


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI .000
 80.000
 .000

SYMBOL X/LB ALPHA MACH
 .892 77.860 1.960
 .923
 .954

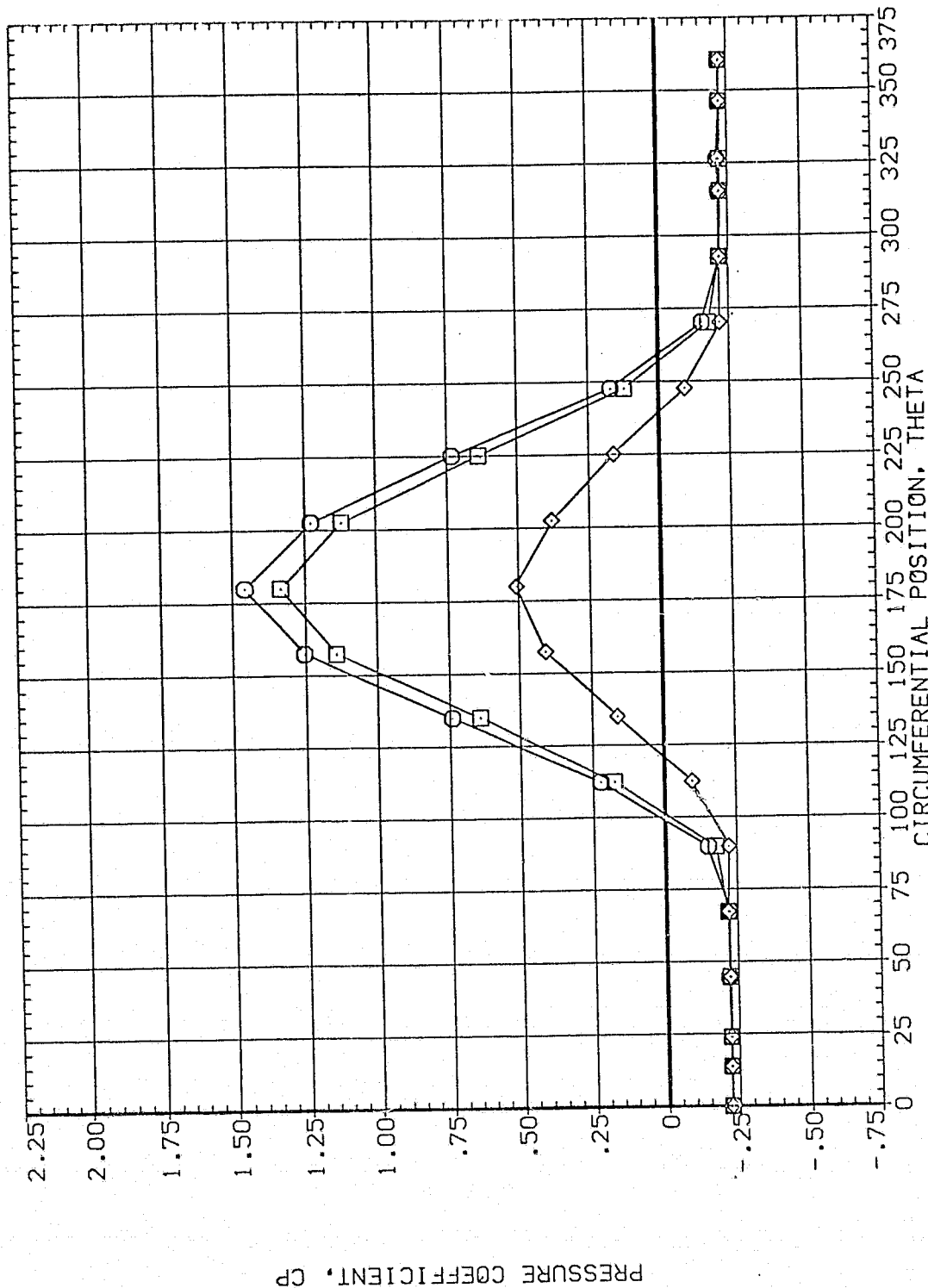


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2484

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	.055	79.930	1.970	HOUNT	PHI	.000
□	.108					
◇	.162					

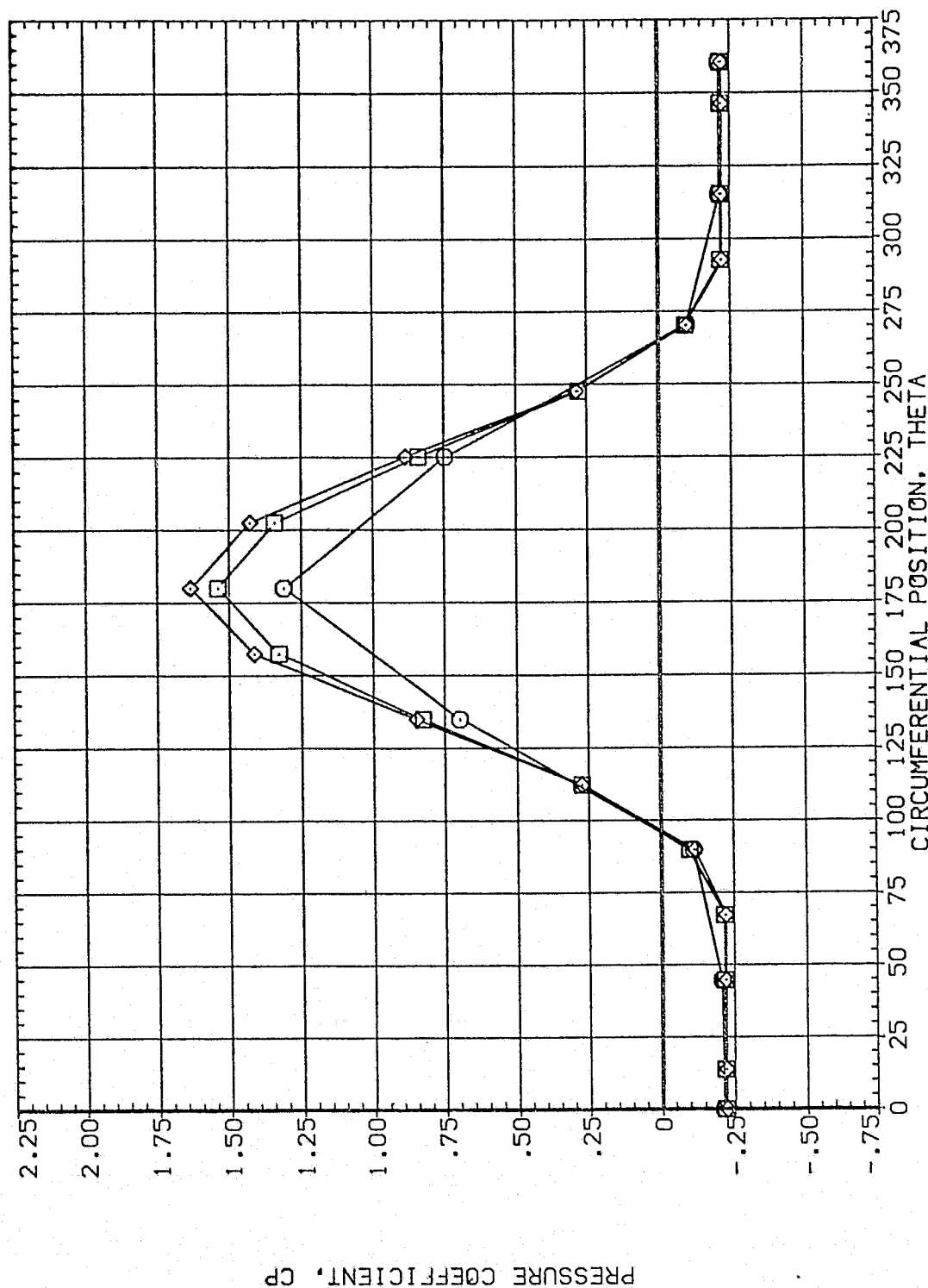


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL
○
□
◇

X/LB .216
.322
.518

ALPHA 79.930
HACH 1.970

PARAMETRIC VALUES
.000 .000 90.000
OFFSET PHI

BETA
MOUNT 2.000

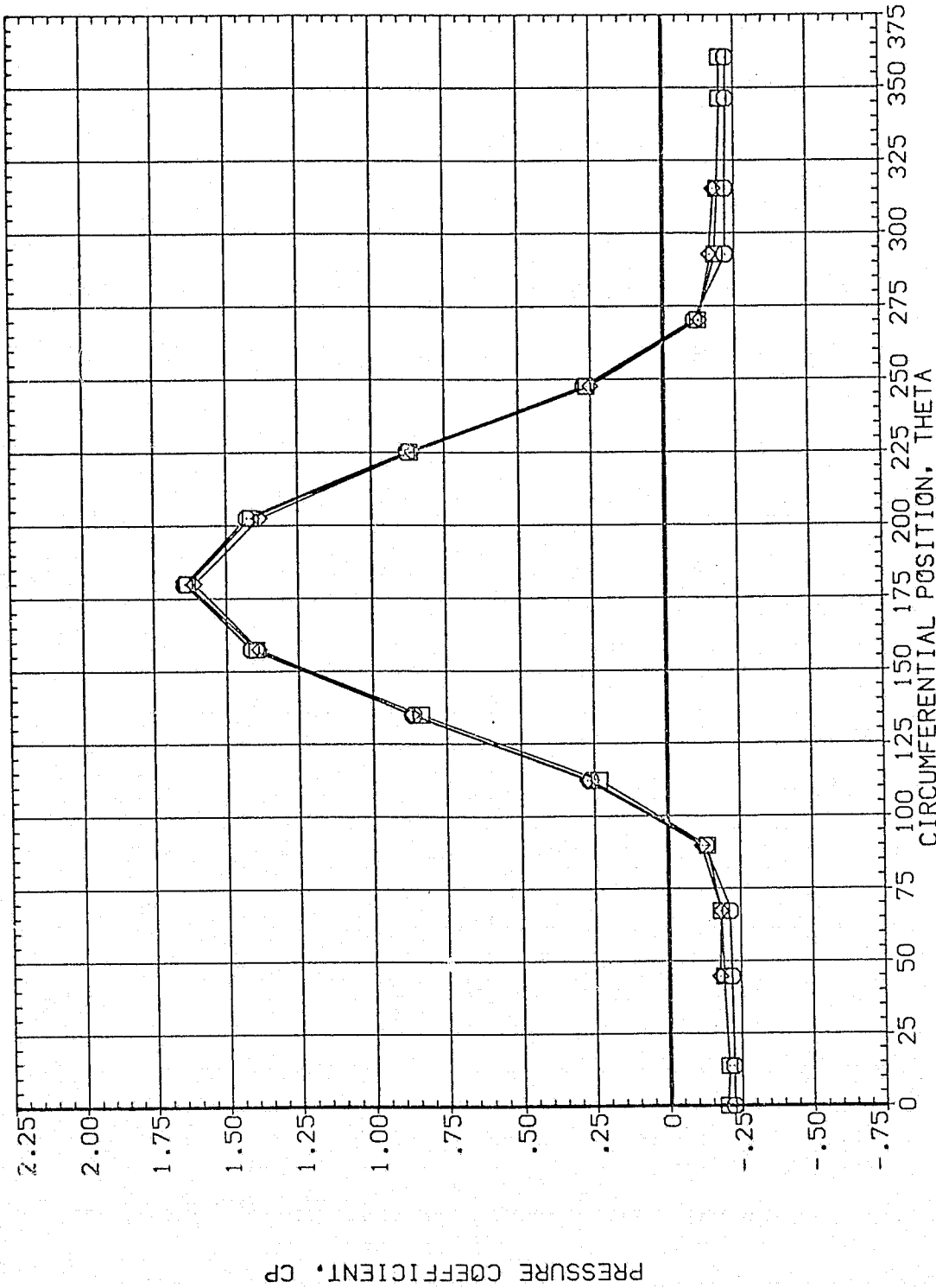


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	79.930	1.970	HOUNT	.000	90.000
□	.735				2.000	
◇	.860					.000

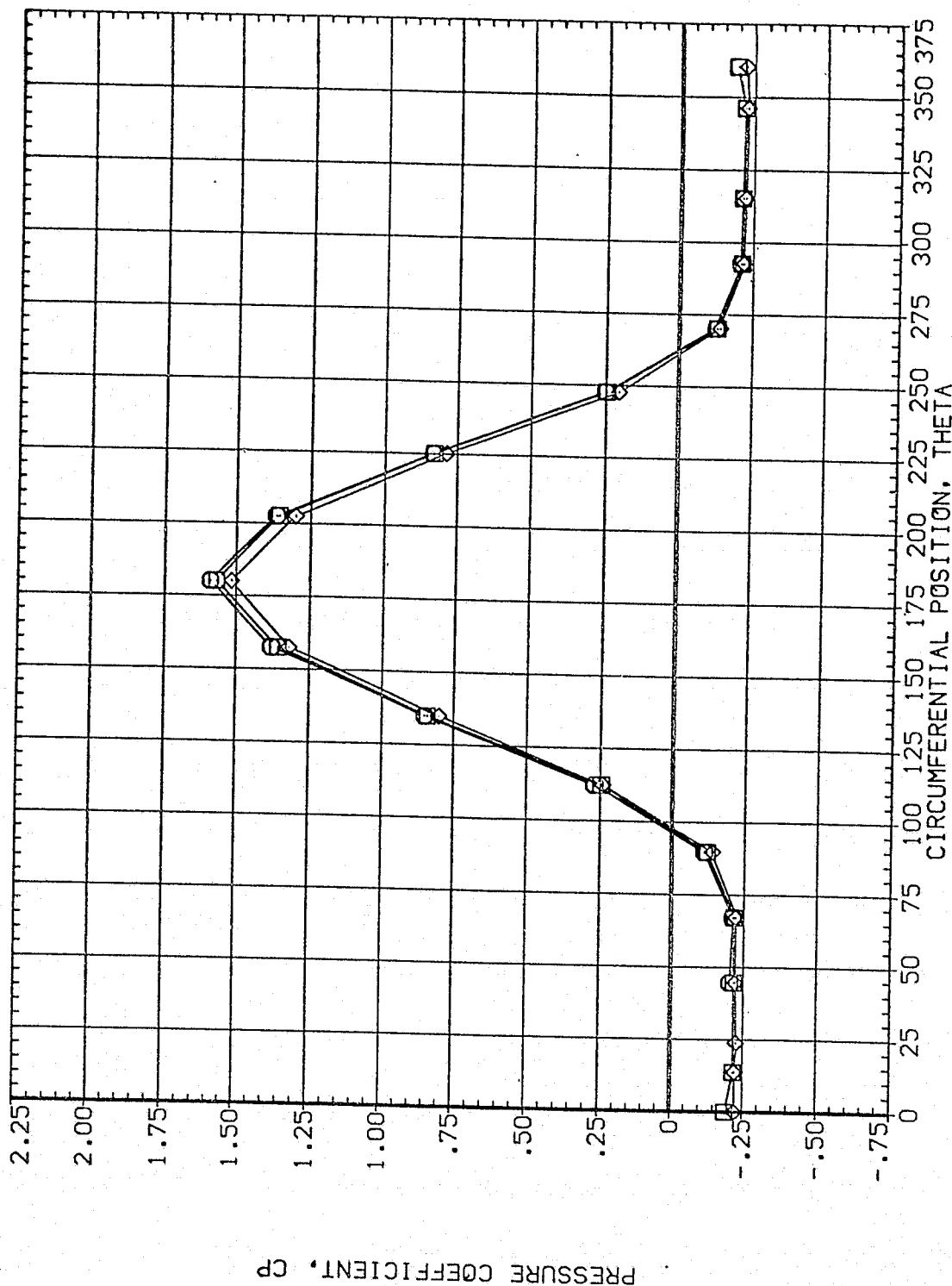


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
OFFSET PHI 90.000

SYMBOL X/LB ALPHA MACH
○ .892 79.930 1.970
□ .923
◇ .954

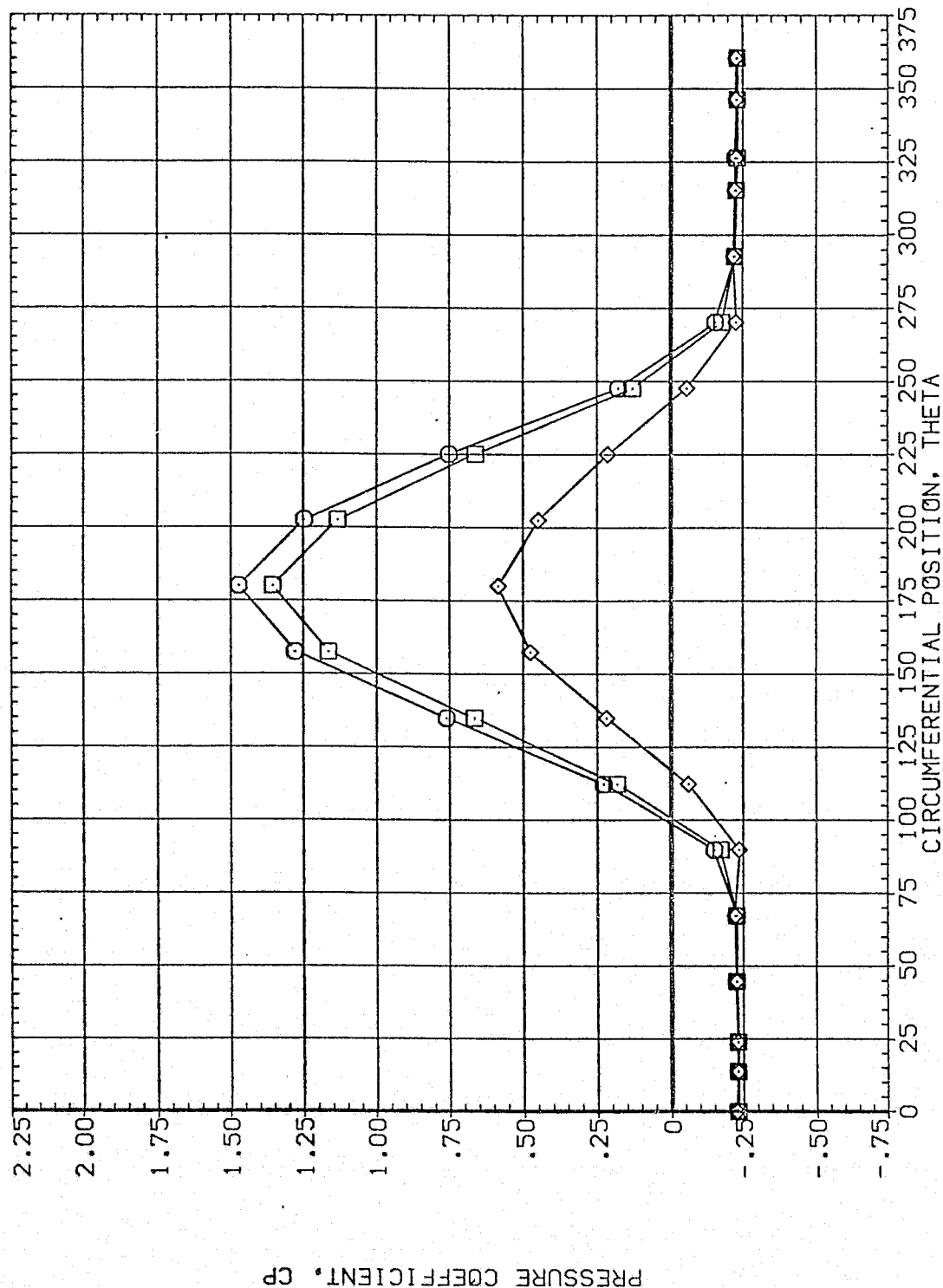


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.055	81.830	1.970	MOUNT	.000
□	.108				OFFSET
◇	.162				PHI
					90.000
					.000

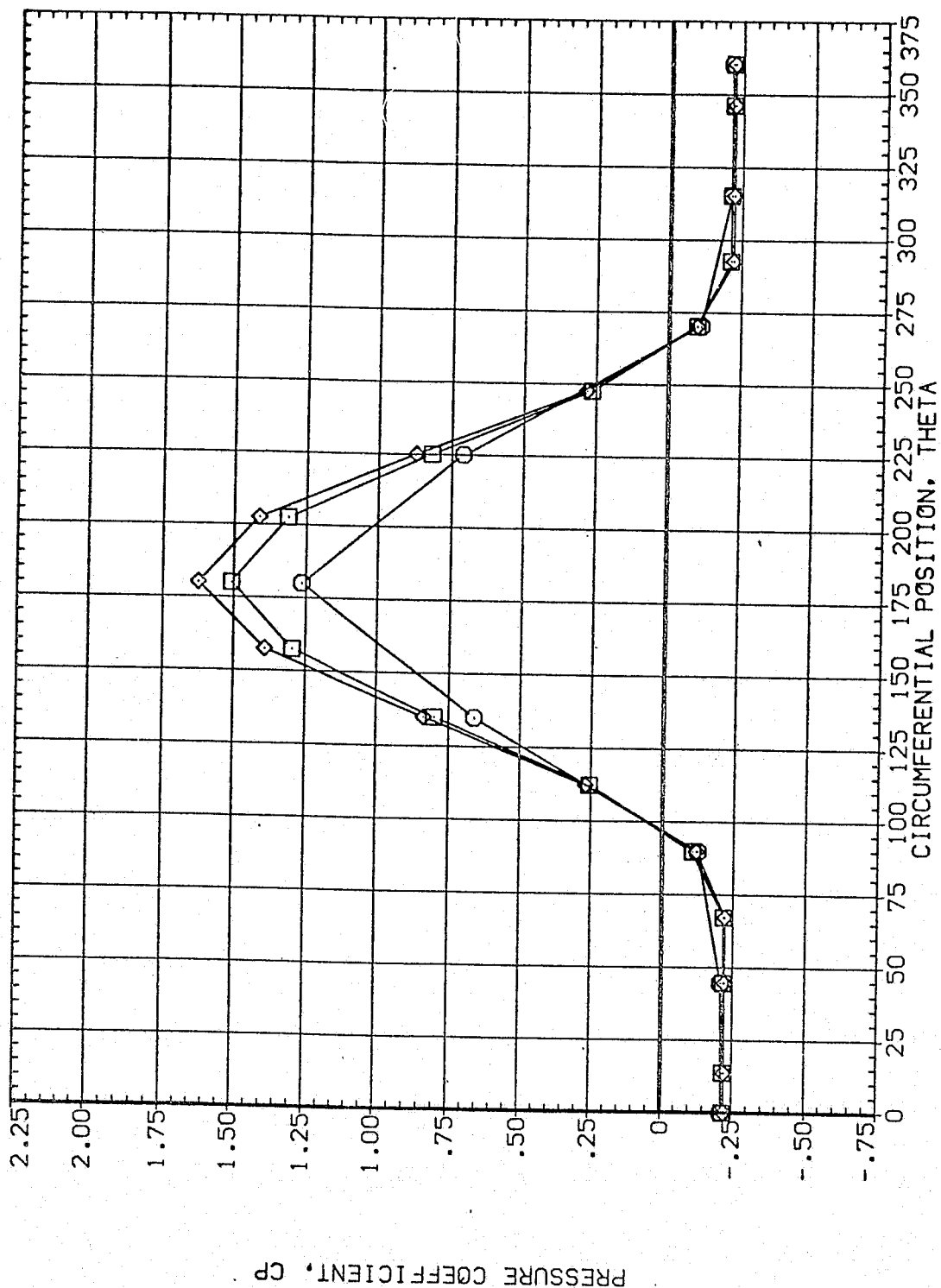


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

(P1A073)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T2

SYMBOL
◇
□
○

X/LB .216
.322
.518
ALPHA 81.830
MACH 1.970

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
OFFSET
PHI

90.000
.000

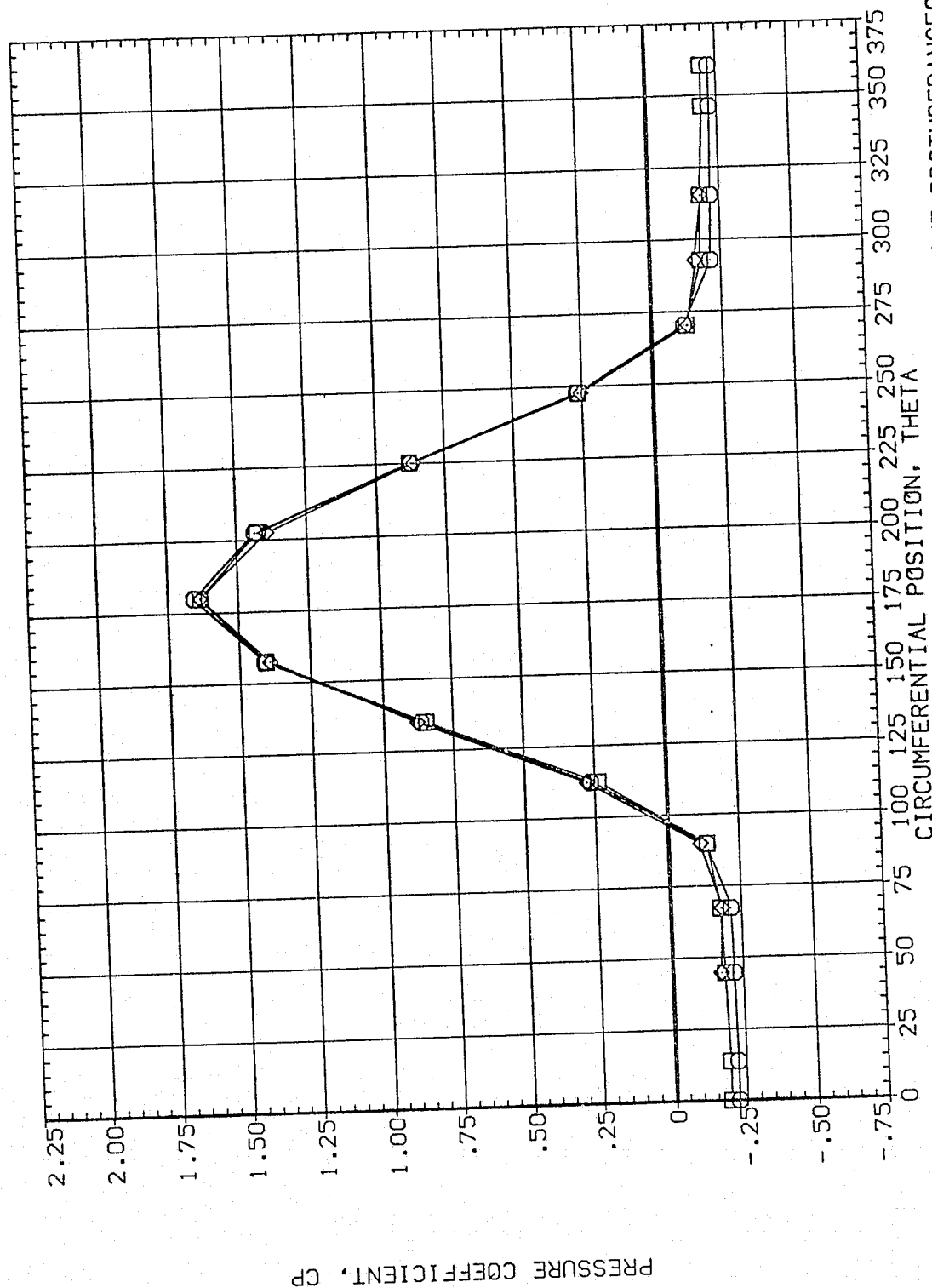


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	81.830	1.970	.000	.000	.000
□	.735			2.000		
◇	.860					

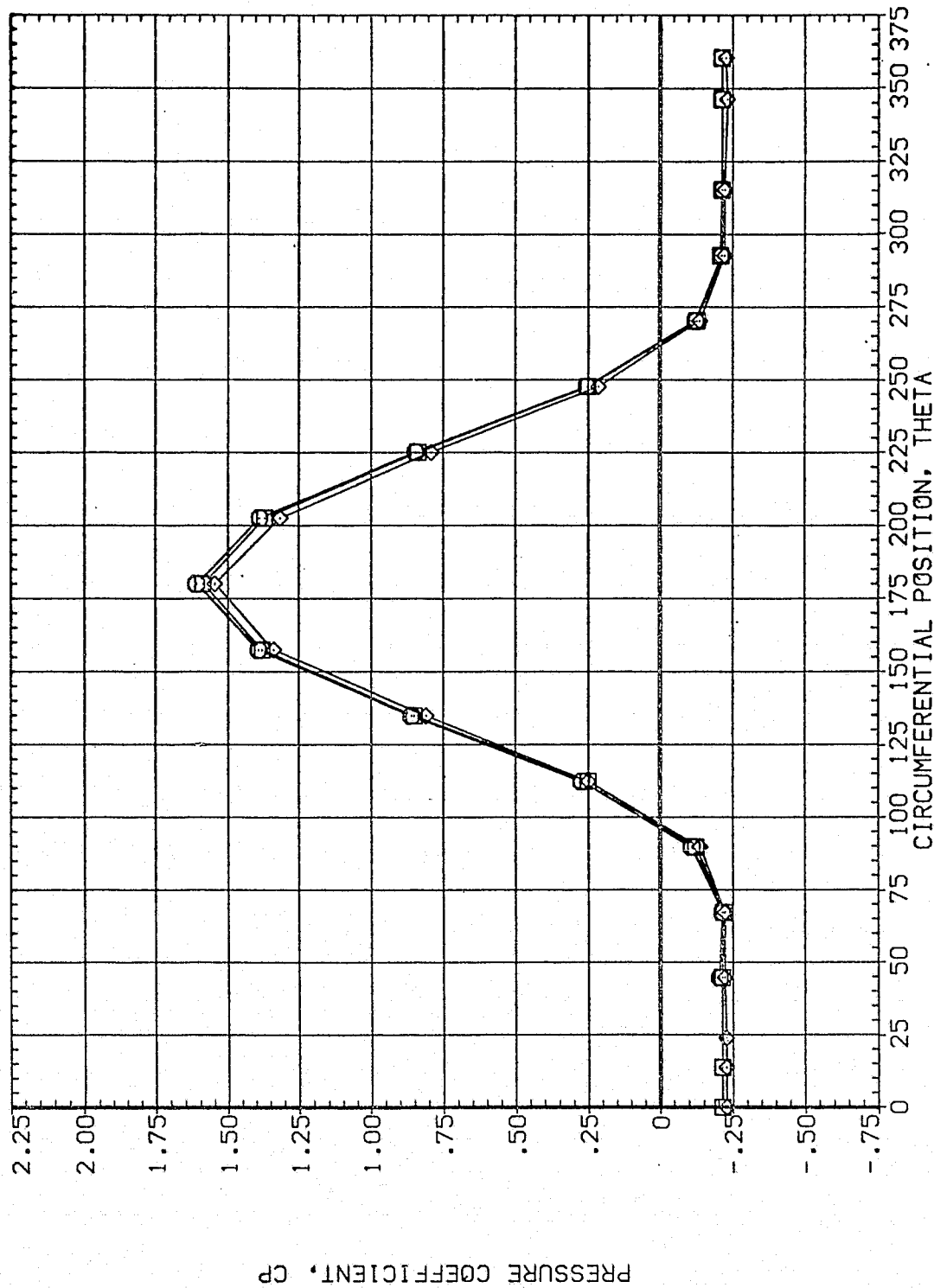


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

PARAMETRIC VALUES
BETA .000
MOUNT .000
PHI .000

SYMBOL X/LB ALPHA MACH
○ .892 81.830 1.970
□ .923
◇ .954

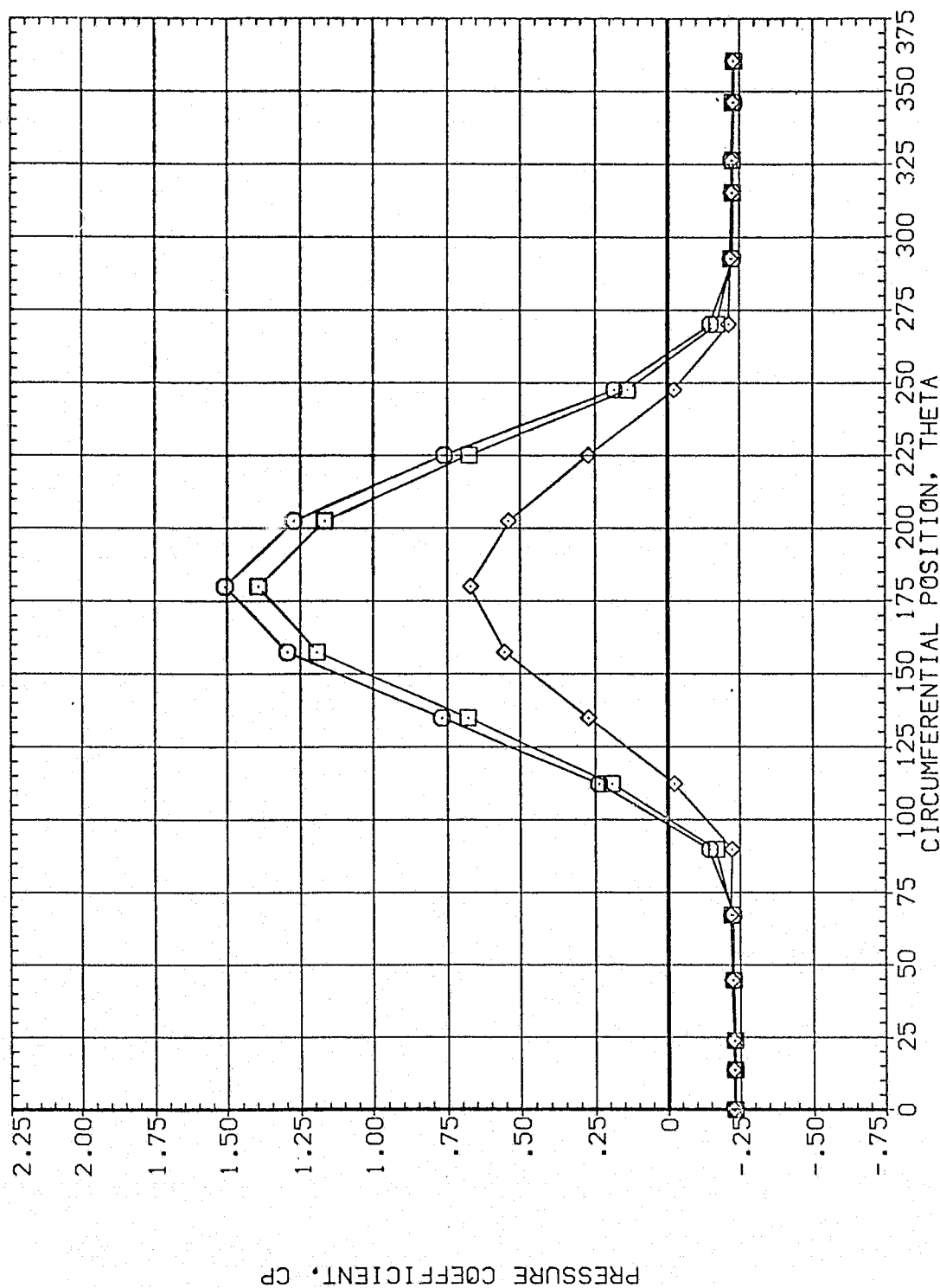


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2492

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A074)

SYMBOL

X/LB

ALPHA

MACH

84.830

1.970

.055

.108

.162

BETA

MOUNT

.000

2.000

PHI

90.000

.000

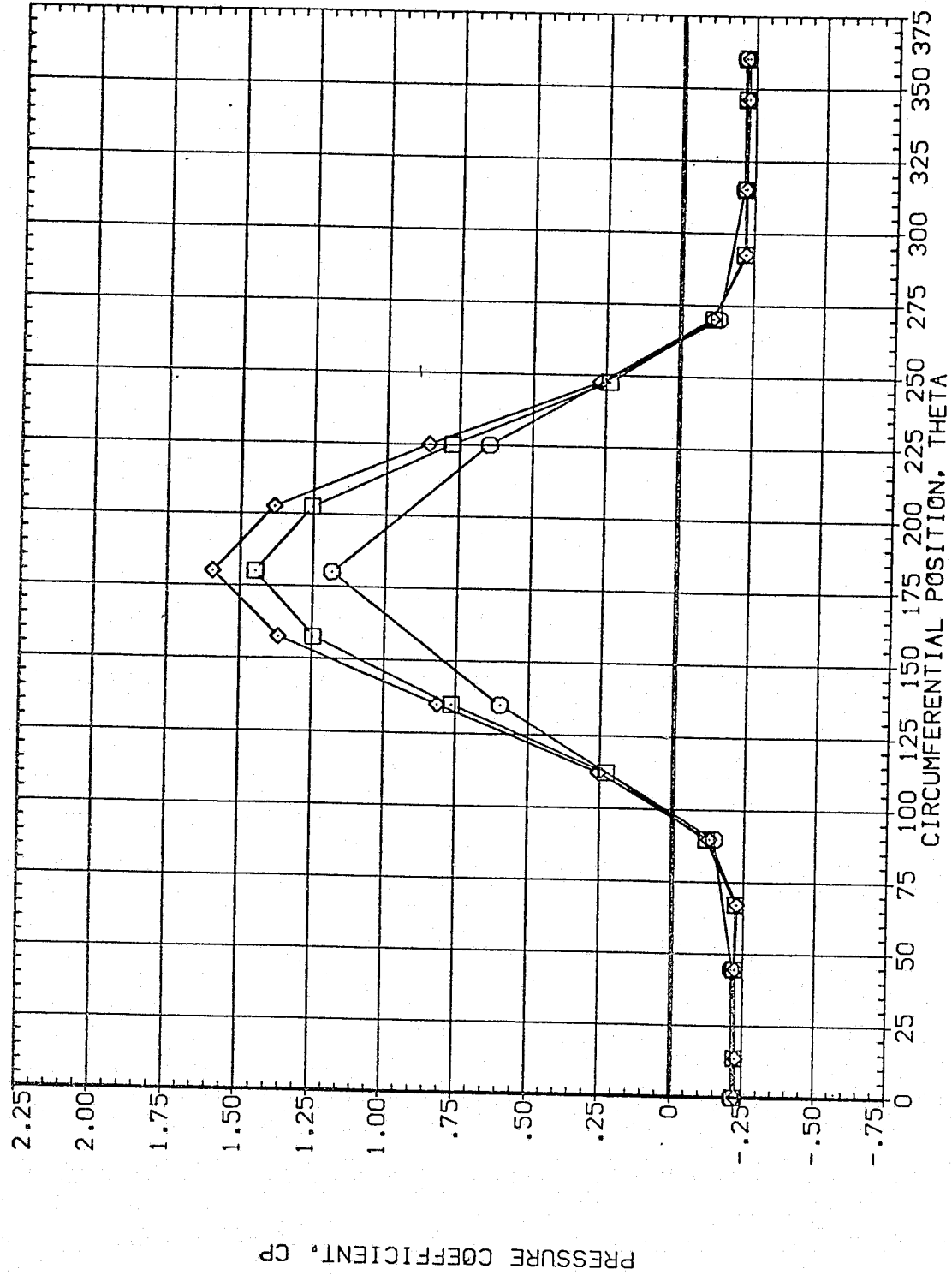


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(PIA074)

SYMBOL

X/LB
.216
.322
.518

ALPHA
84.830
MACH
1.970

BETA
MOUNT
PARAMETRIC VALUES
.000
2.000
OFFSET
PHI
90.000
.000

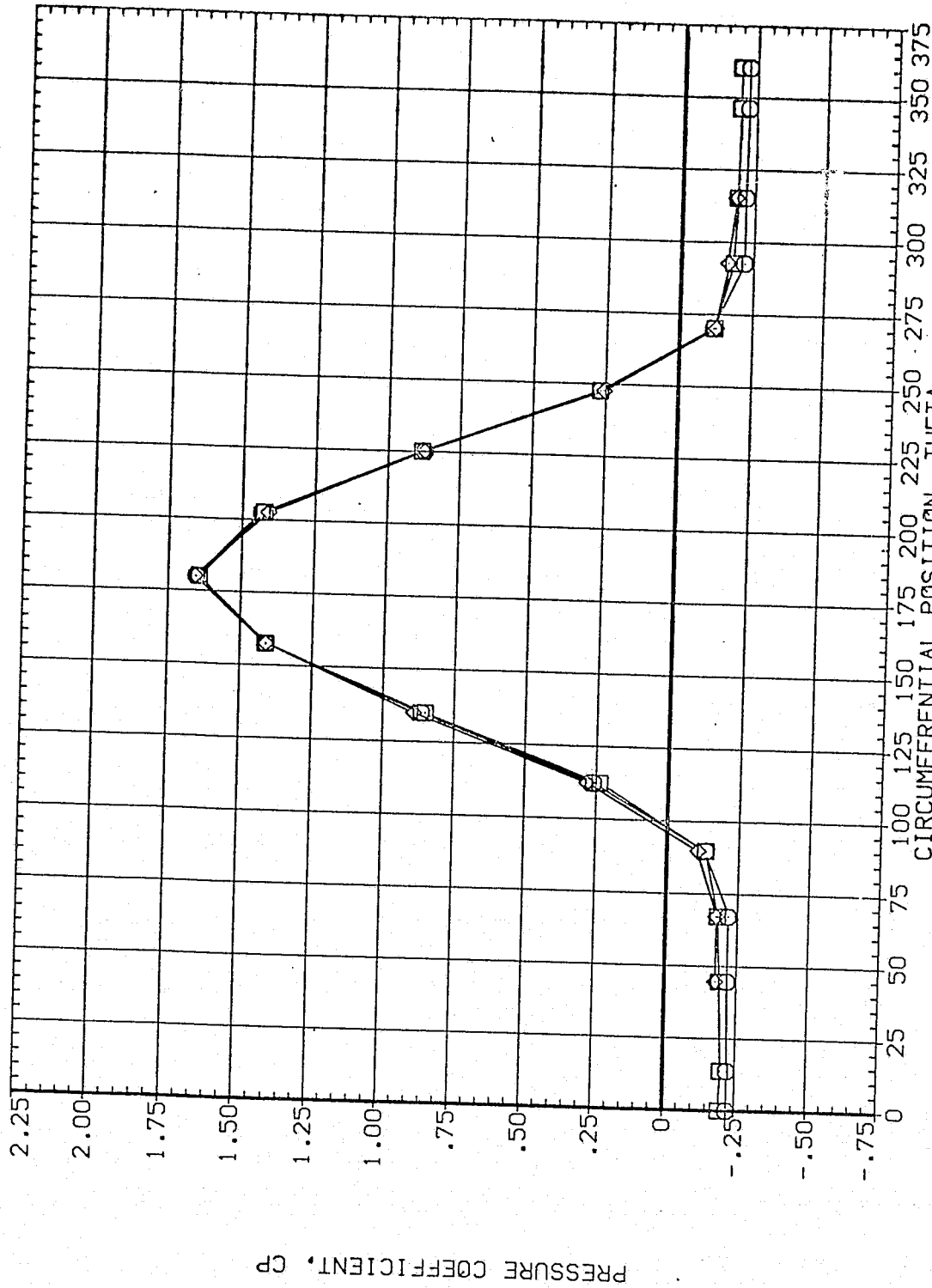


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL

X/LB
.610
.735
.860

ALPHA
84.830

MACH
1.970

PARAMETRIC VALUES
BETA
MOUNT
OFFSET
PHI
90.000
2.000
90.000
0.000

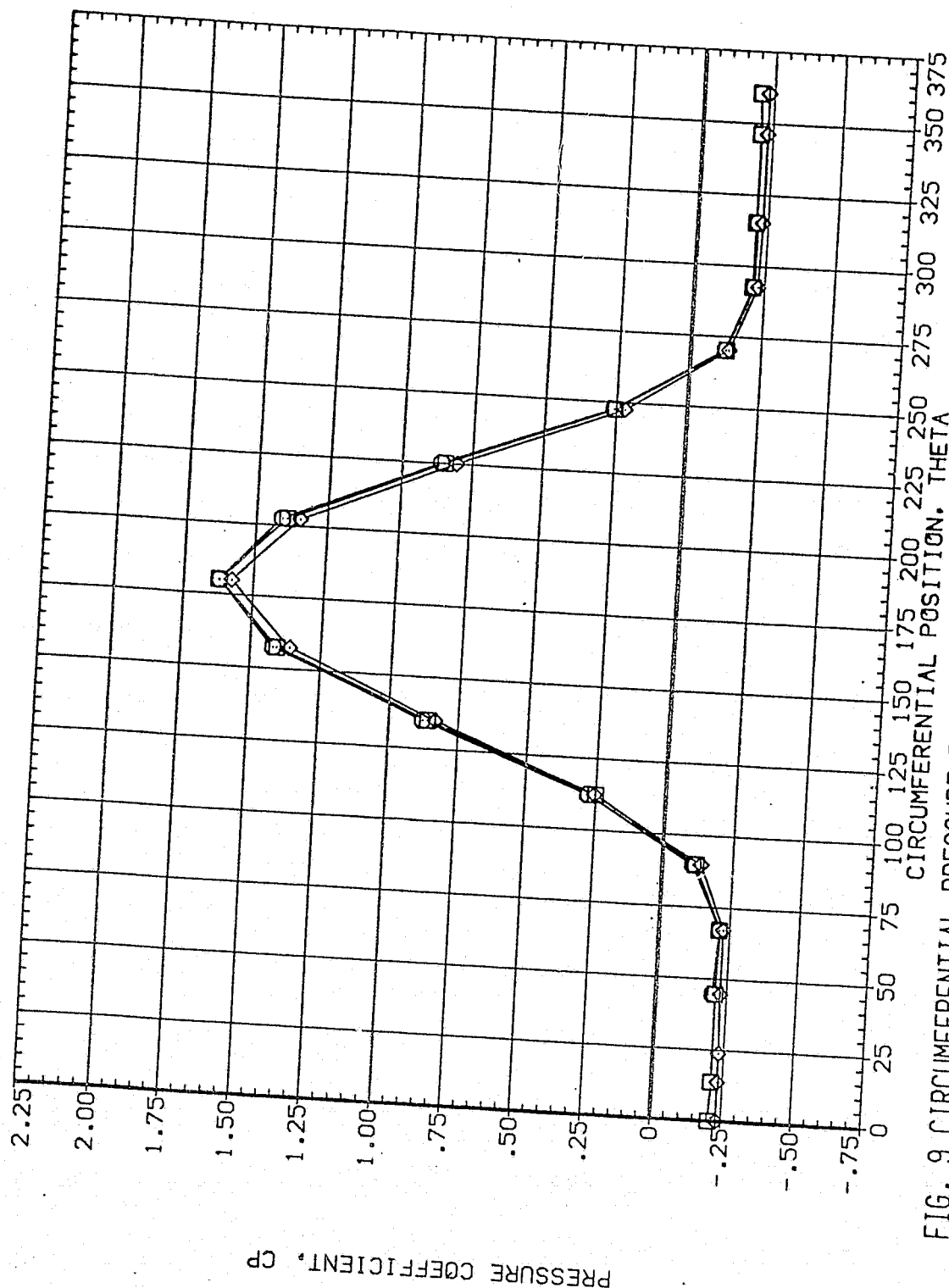


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL X/LB ALPHA MACH
 ○ .892 84.830 1.970
 □ .923
 ◇ .954

PARAMETRIC VALUES
 BETA .000 OFFSET 90.000
 MOUNT 2.000 PHI .000

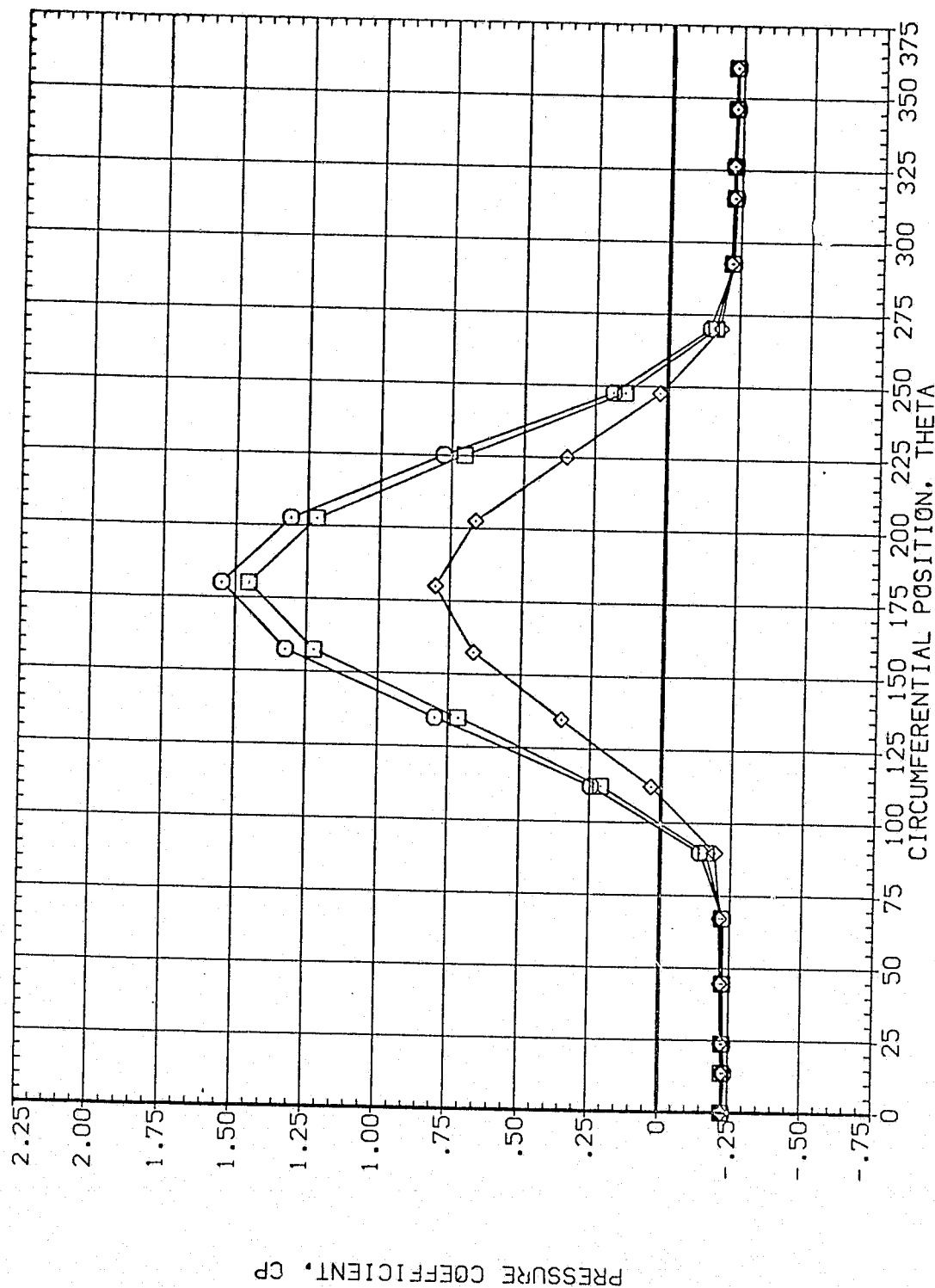


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.055	87.830	1.970	MOUNT	.000
□	.108			OFFSET	.000
◇	.162			PHI	.000

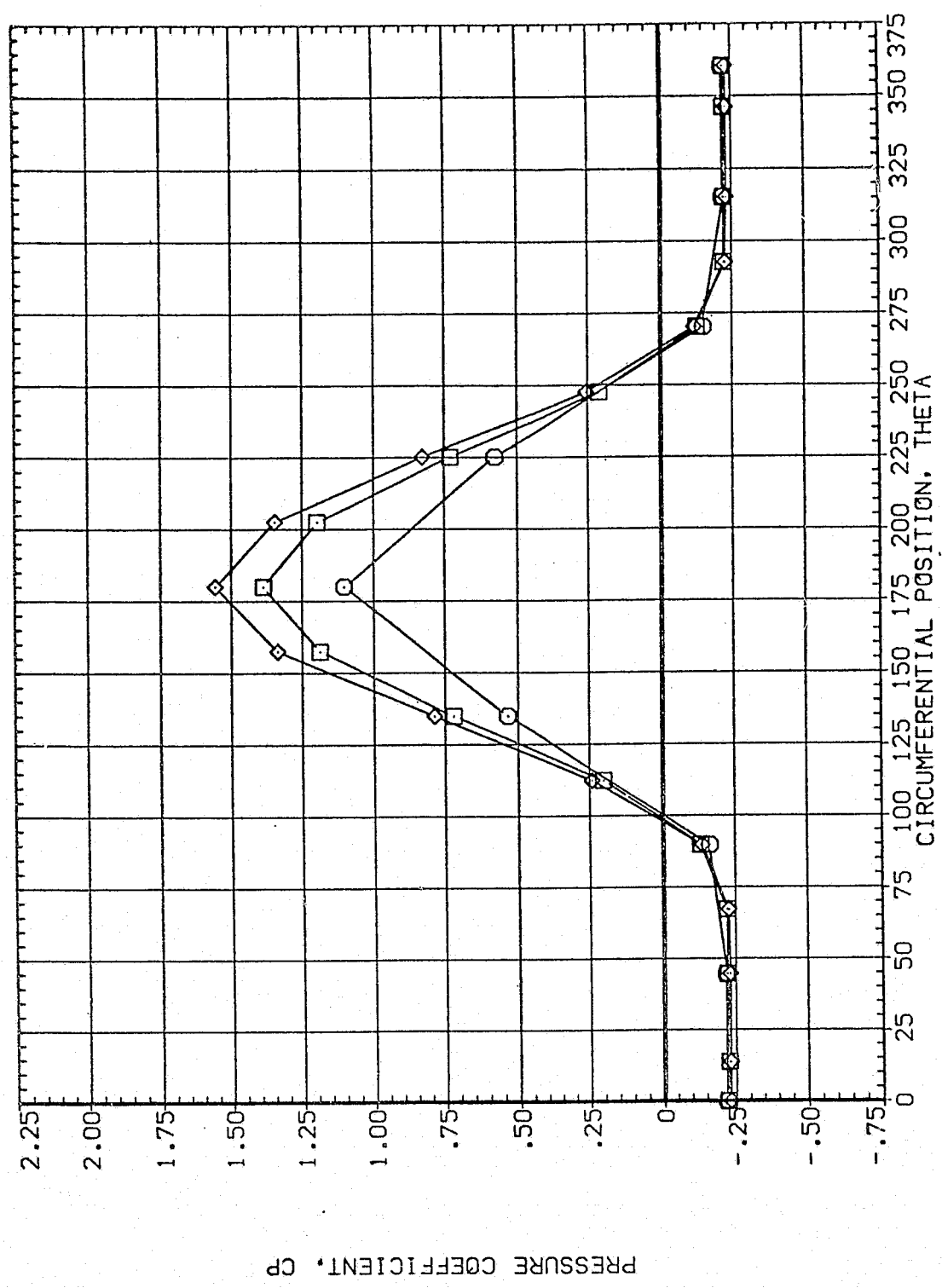


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	.216	87.830	1.970	MOUNT	2.000	PHI
□	.322					.000
◇	.518					

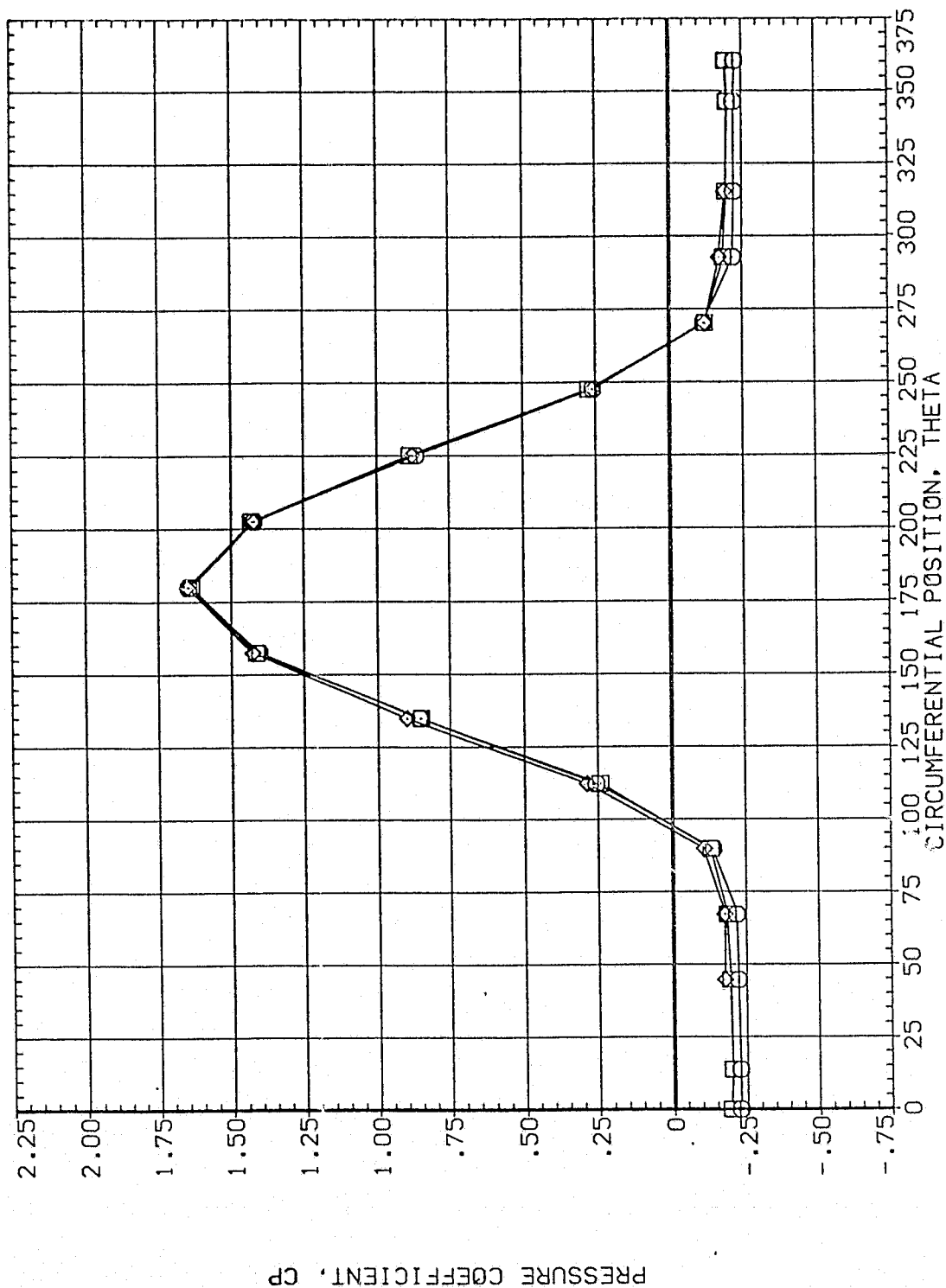


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	87.830	1.970	MOUNT	.000	.000
□	.735				2.000	
◇	.860					

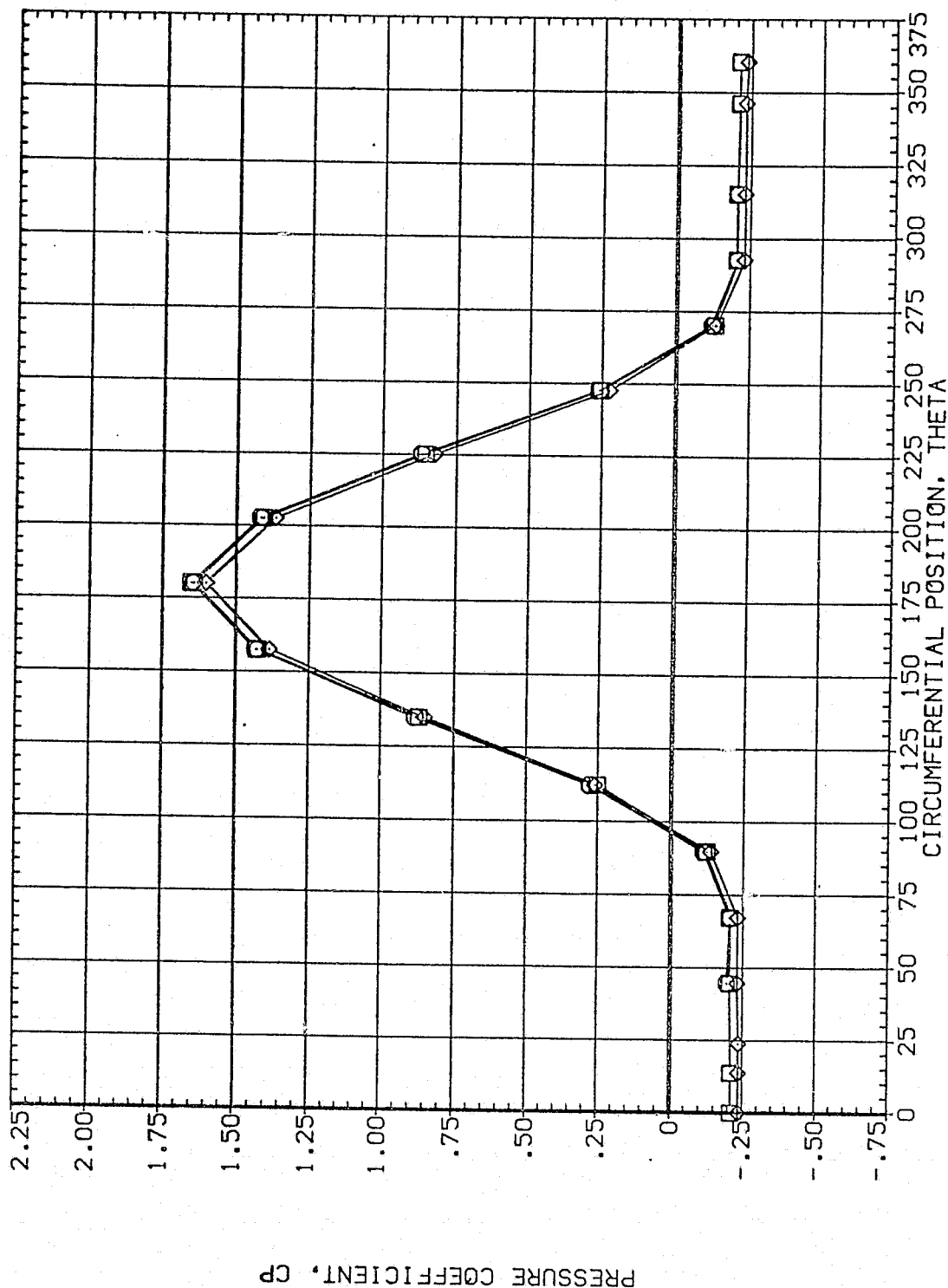


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

SYMBOL X/LB ALPHA MACH
 .892
 .923
 .954
 87.830 1.970

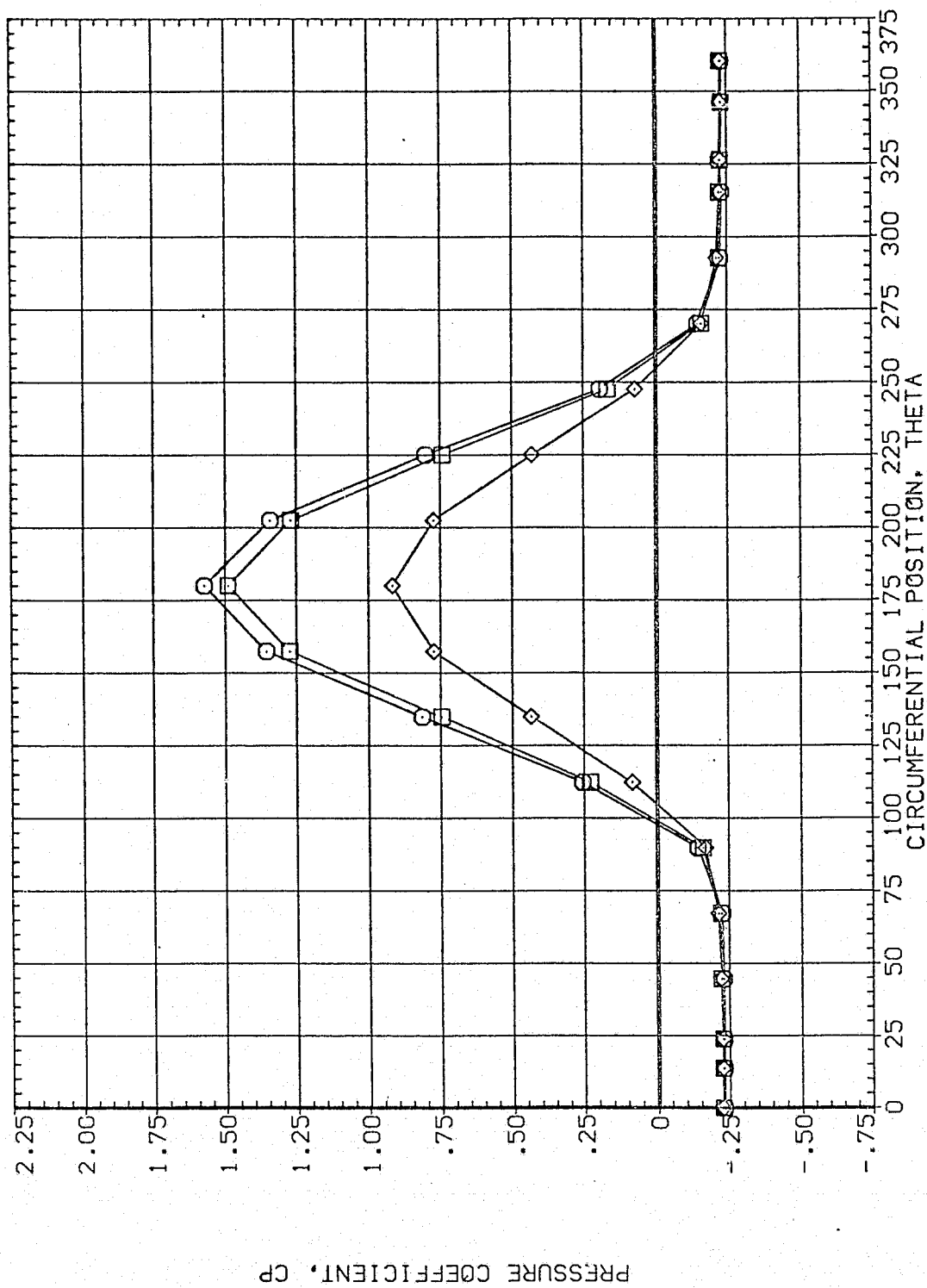


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2500

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2. (P1A076)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
◇	.055	89.830	1.960	MOUNT	2.000	.000
□	.108					
◇	.162					

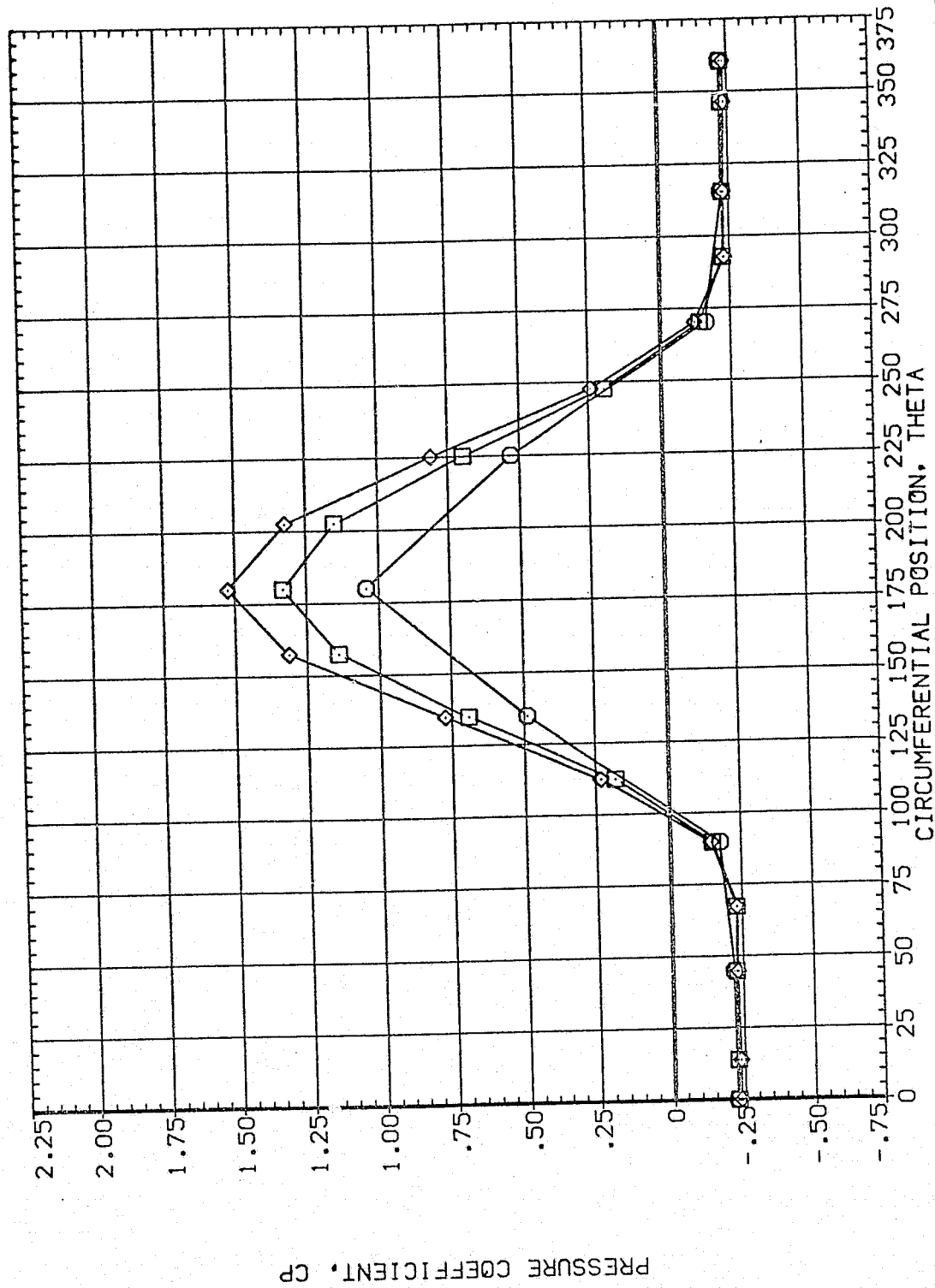


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL
□
◇

X/LB .216
.322
.518
ALPHA 89.830
MACH 1.960

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
OFFSET 90.000
PHI .000

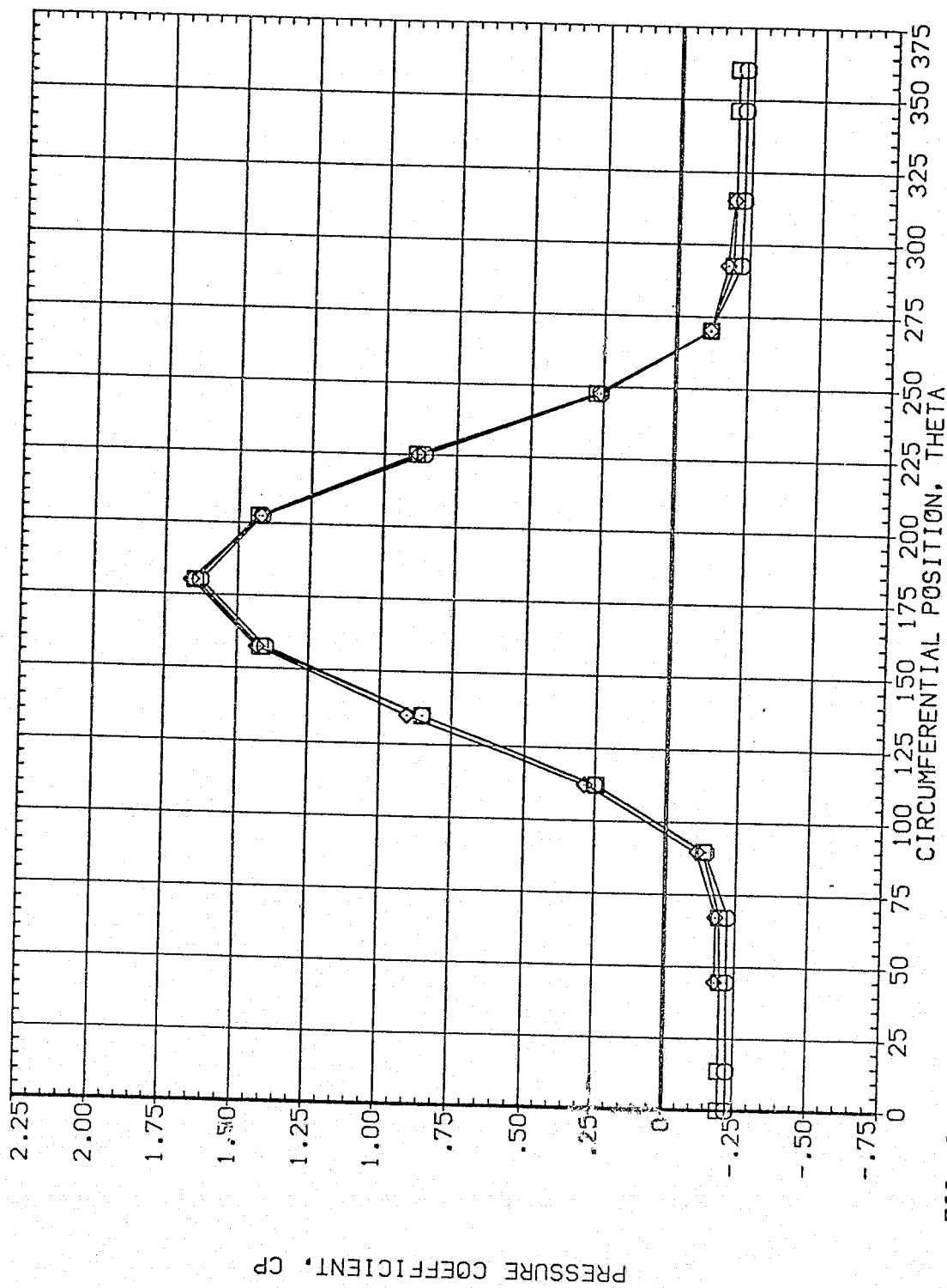


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	89.830	1.960	.000	.000	.000
□	.735			2.000		
◇	.860					

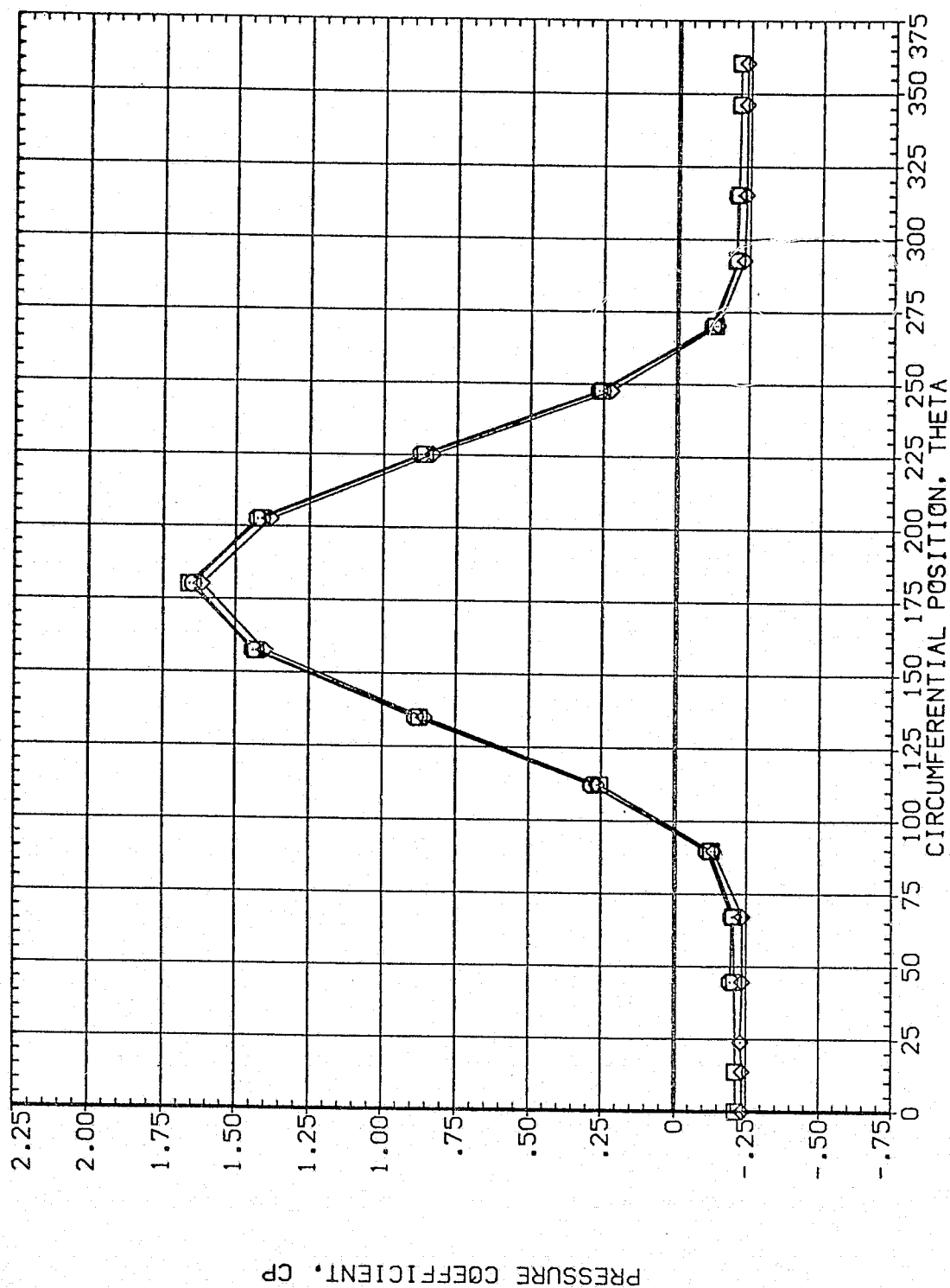


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.892	89.830	1.960	MOUNT	.000 OFFSE"
□	.923				2.000 PHI
◇	.954				.000

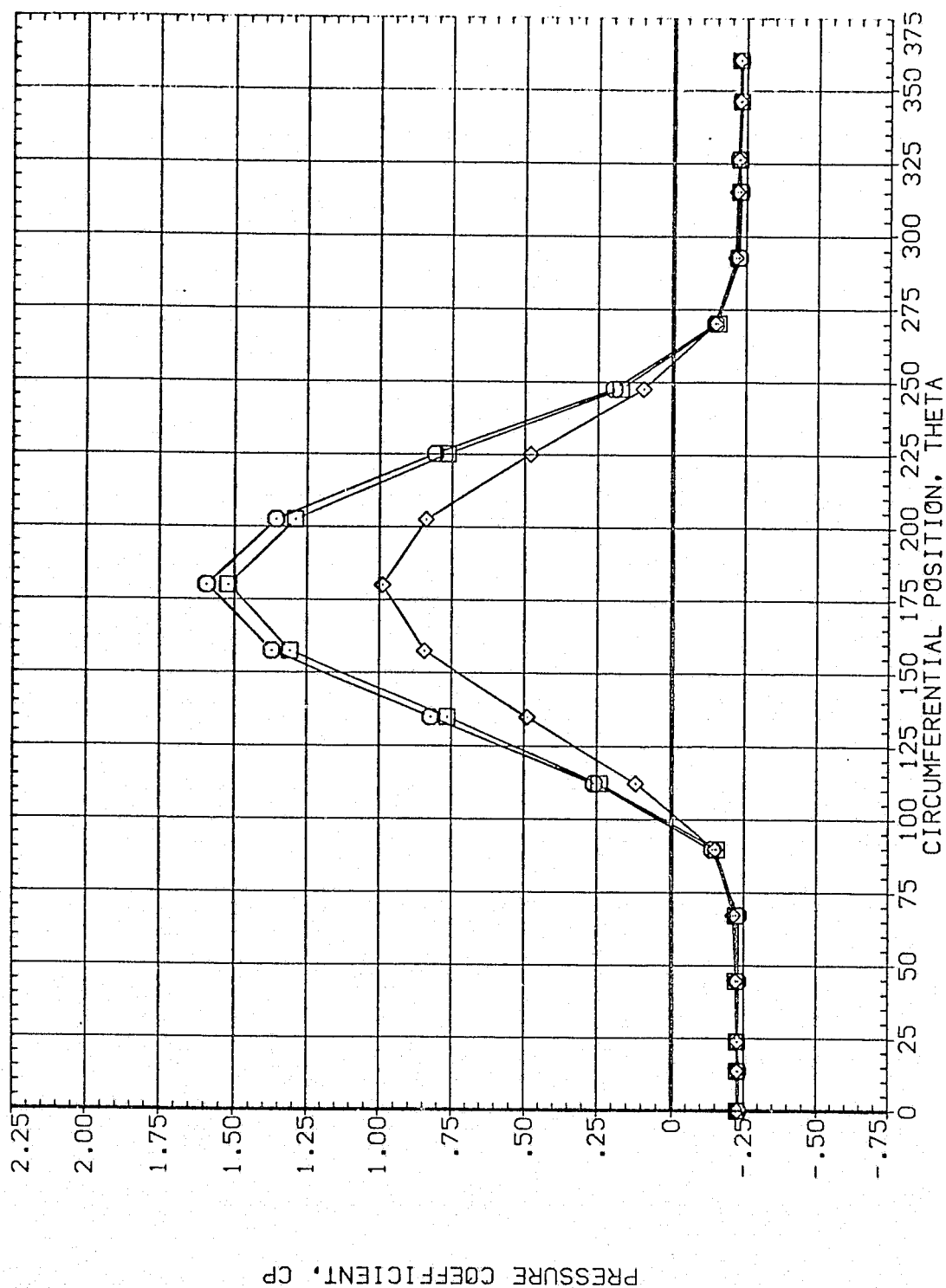


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL X/LB ALPHA MACH
 ○ .055 91.830 1.960
 □ .108
 ◇ .162

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

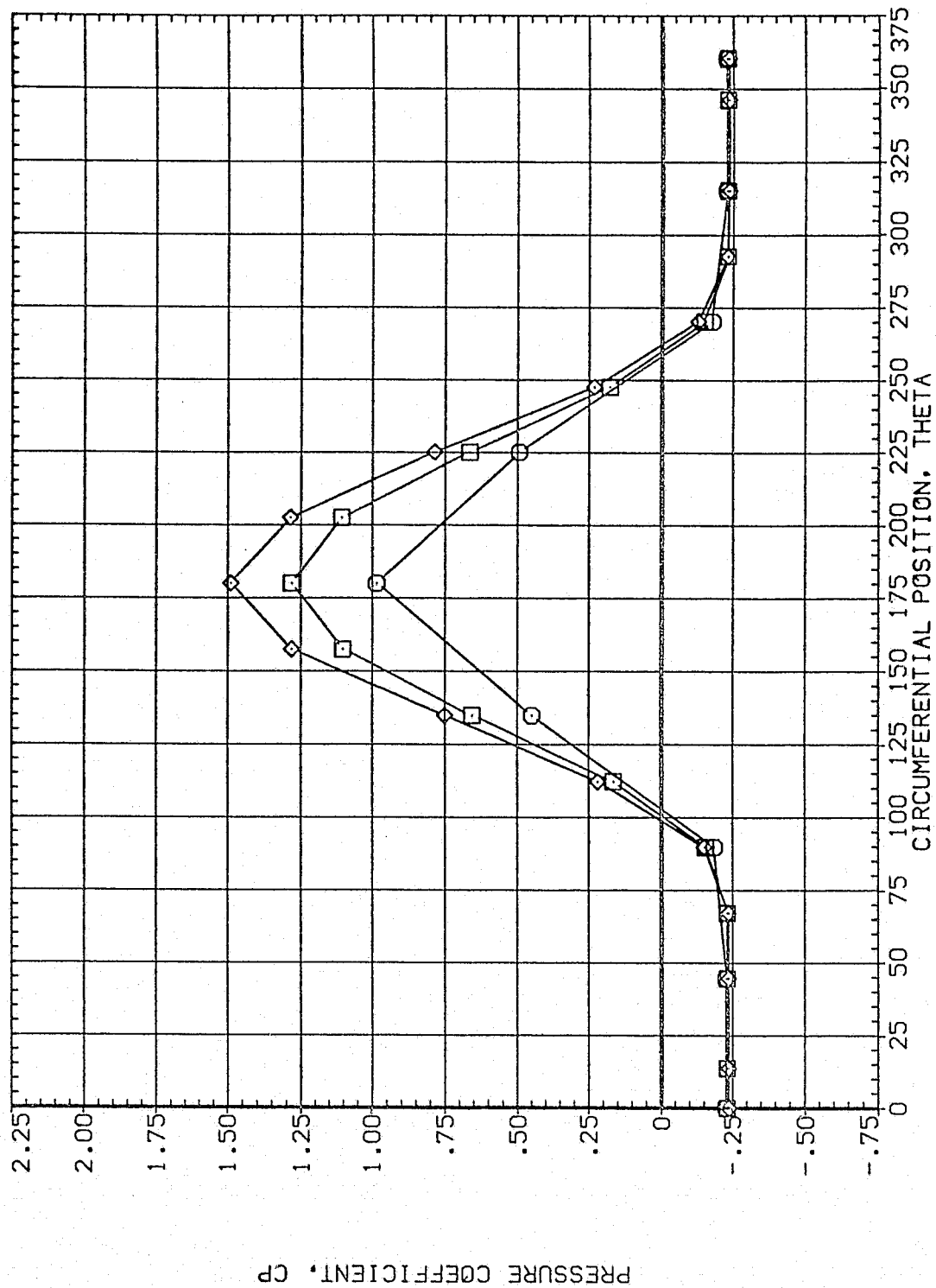


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

(P1A077)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA MOUNT	OFFSET PHI	90.000 .000
□	.216	91.830	1.960	2.000		
◇	.322					
◇	.518					

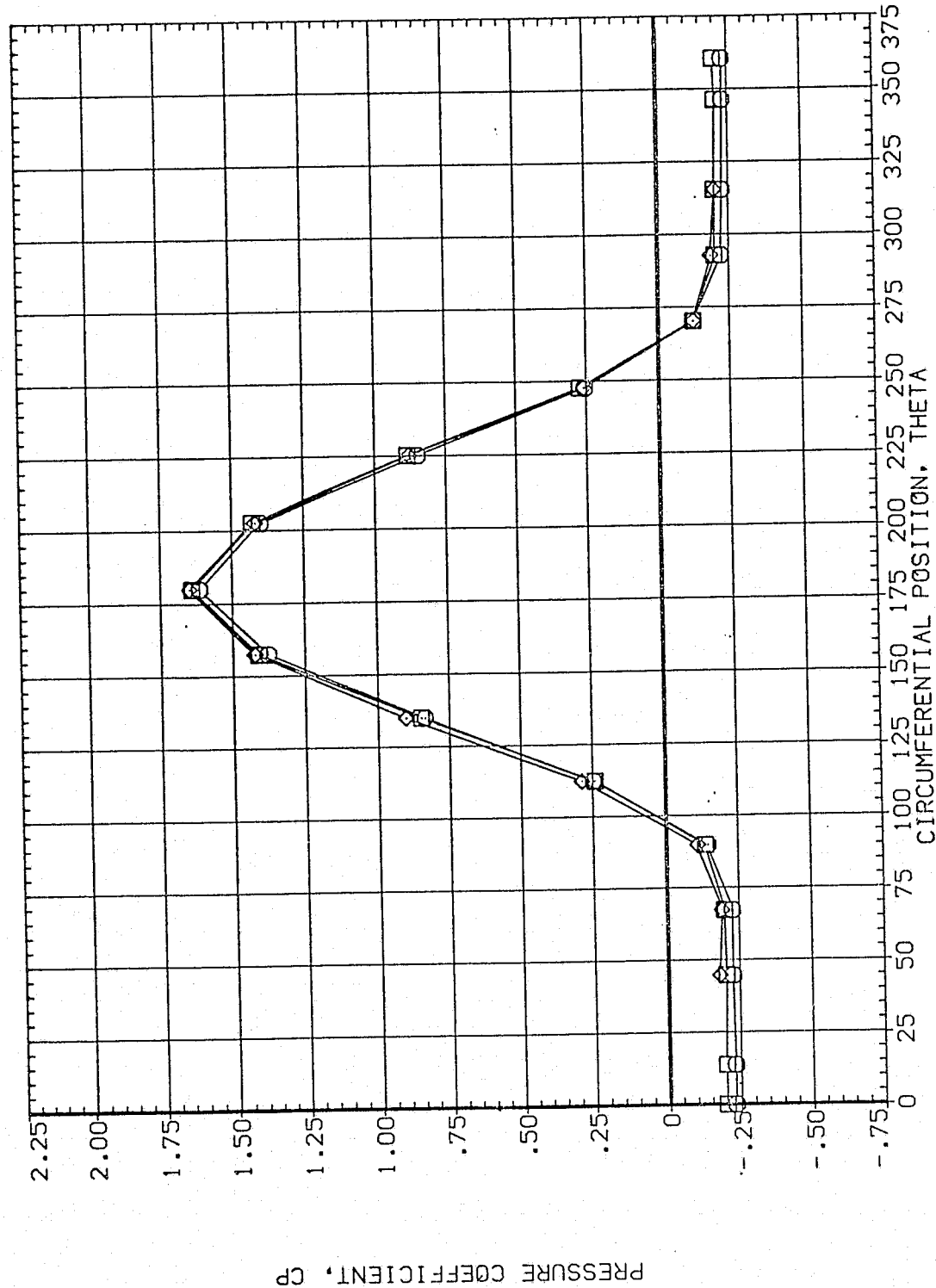


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL X/LB ALPHA MACH
 ○ .610 91.830 1.960
 □ .735
 ◇ .860

PARAMETRIC VALUES
 BETA .000 OFFSET 90.000
 MOUNT 2.000 PHI .000

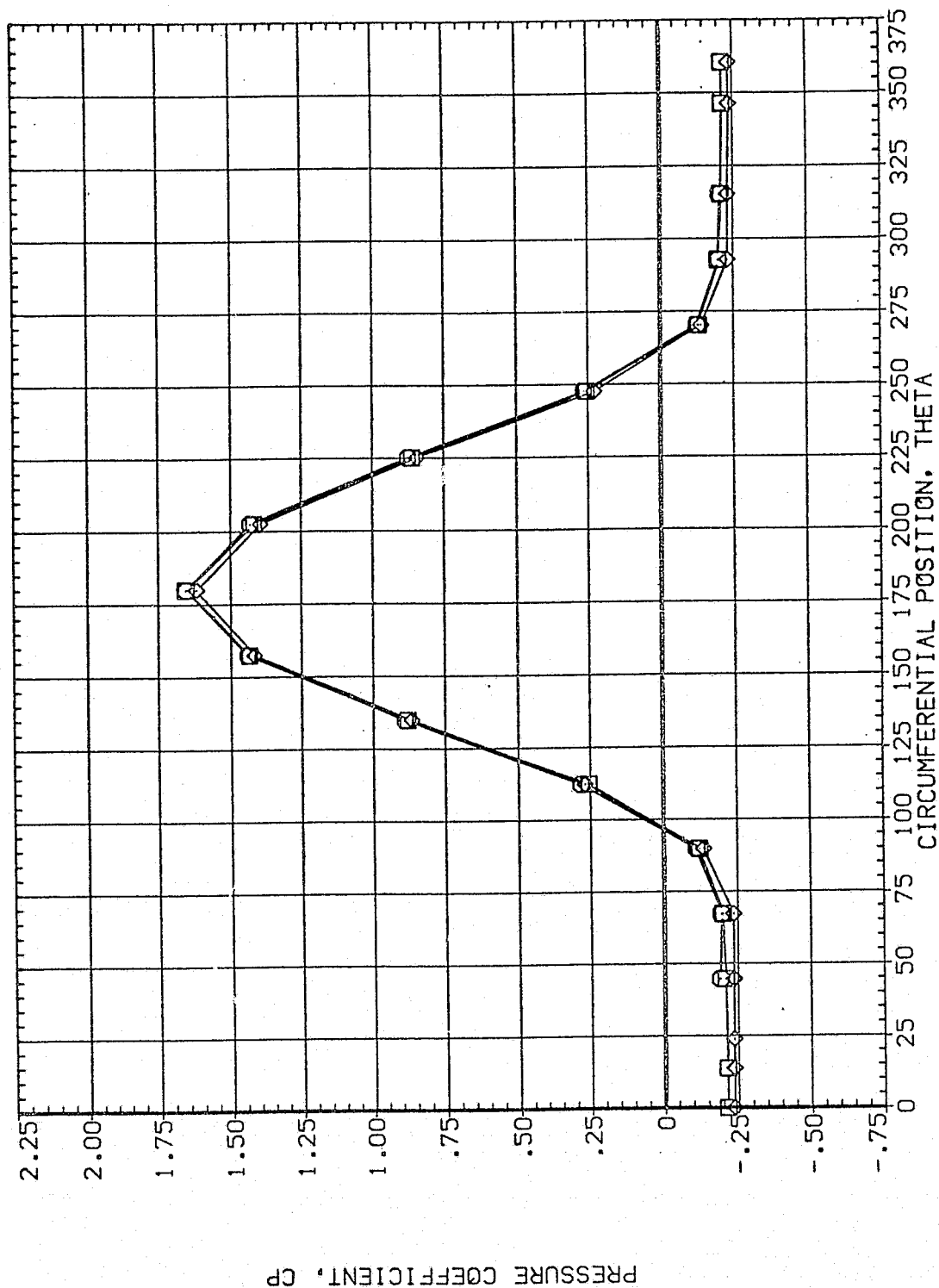


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL X/LB ALPHA MACH
 □ .892 91.830 1.960
 ◇ .923 .954

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 PHI 90.000
 .000

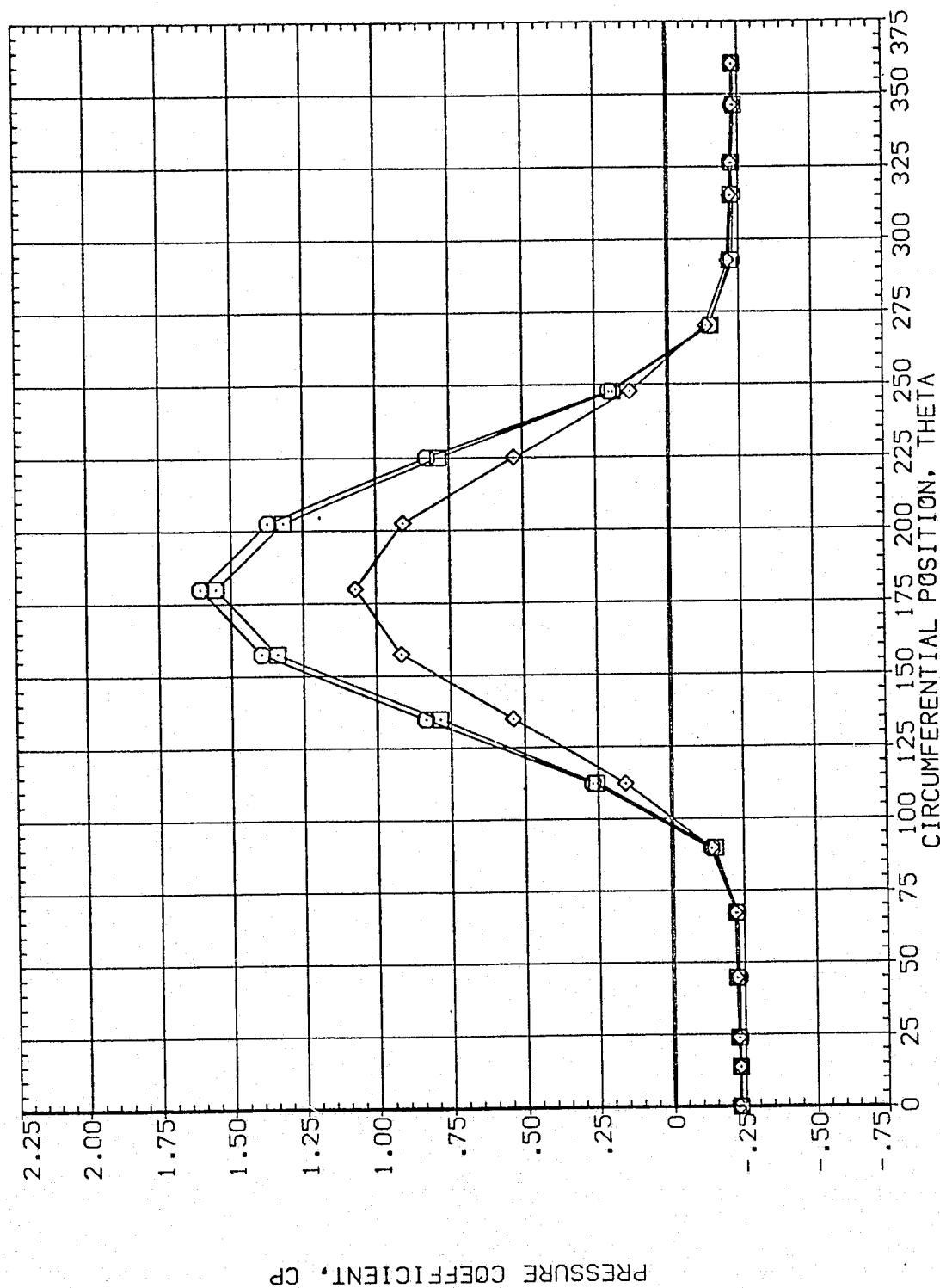


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	.055	94.850	1.960	HOUNT	2.000	PHI
□	.108					
◇	.162					

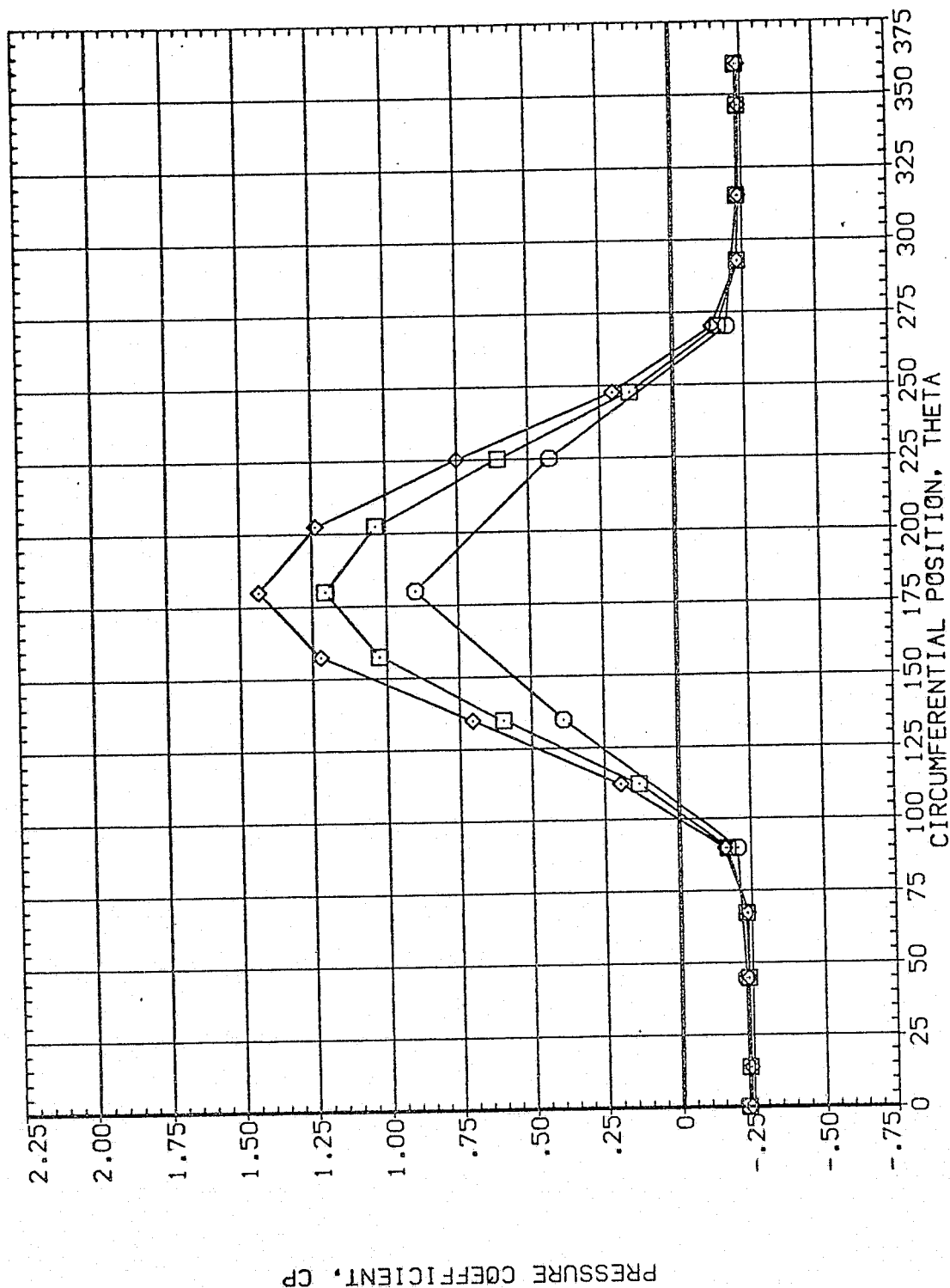


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.216	94.850	1.960	.000	2.000	90.000
□	.322					.000
◇	.518					

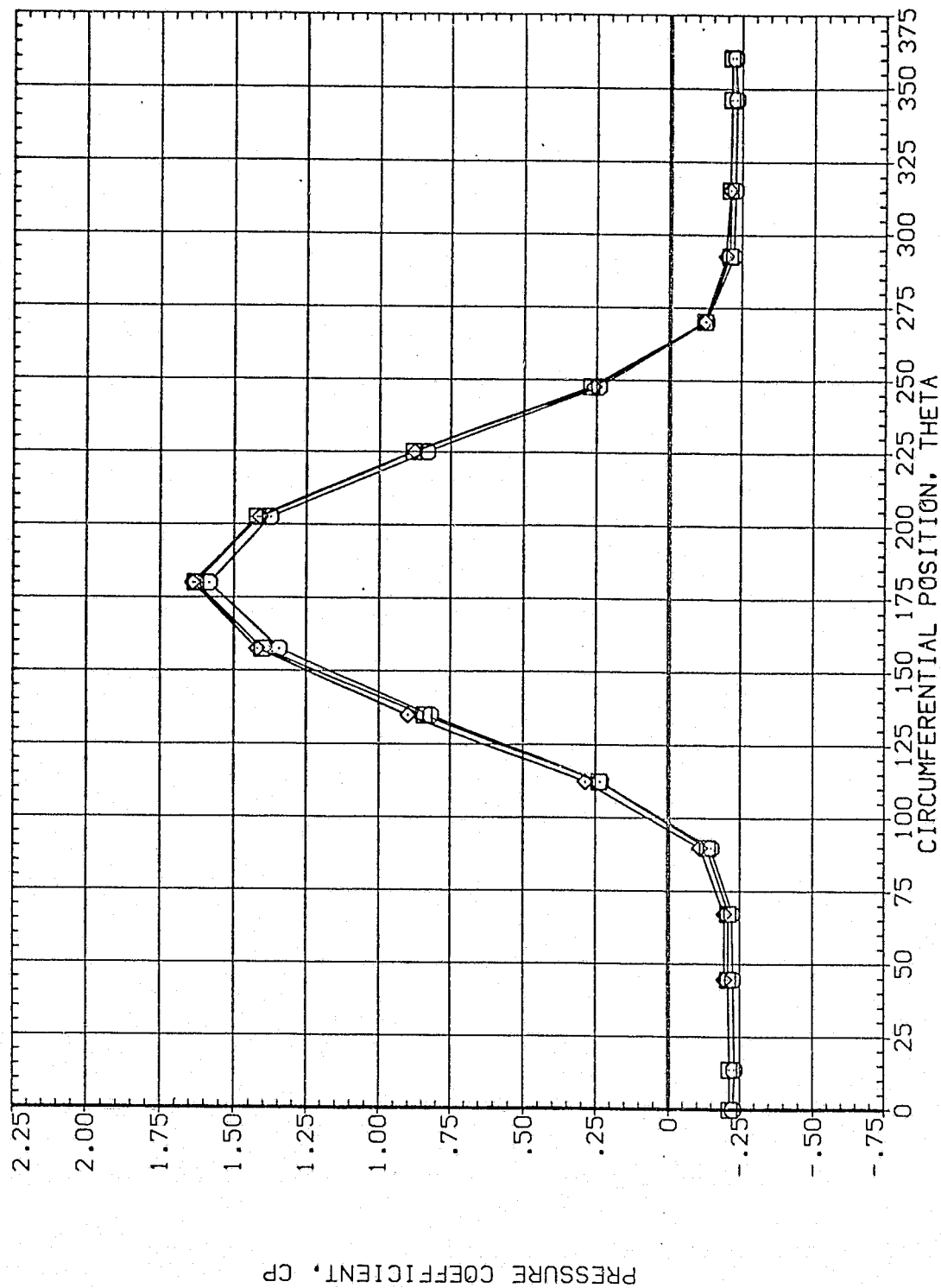


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES			
				BETA	OFFSET	PHI	
○	.610	94.850	1.960	MOUNT	.000	2.000	90.000
◇	.735						.000
◇	.860						

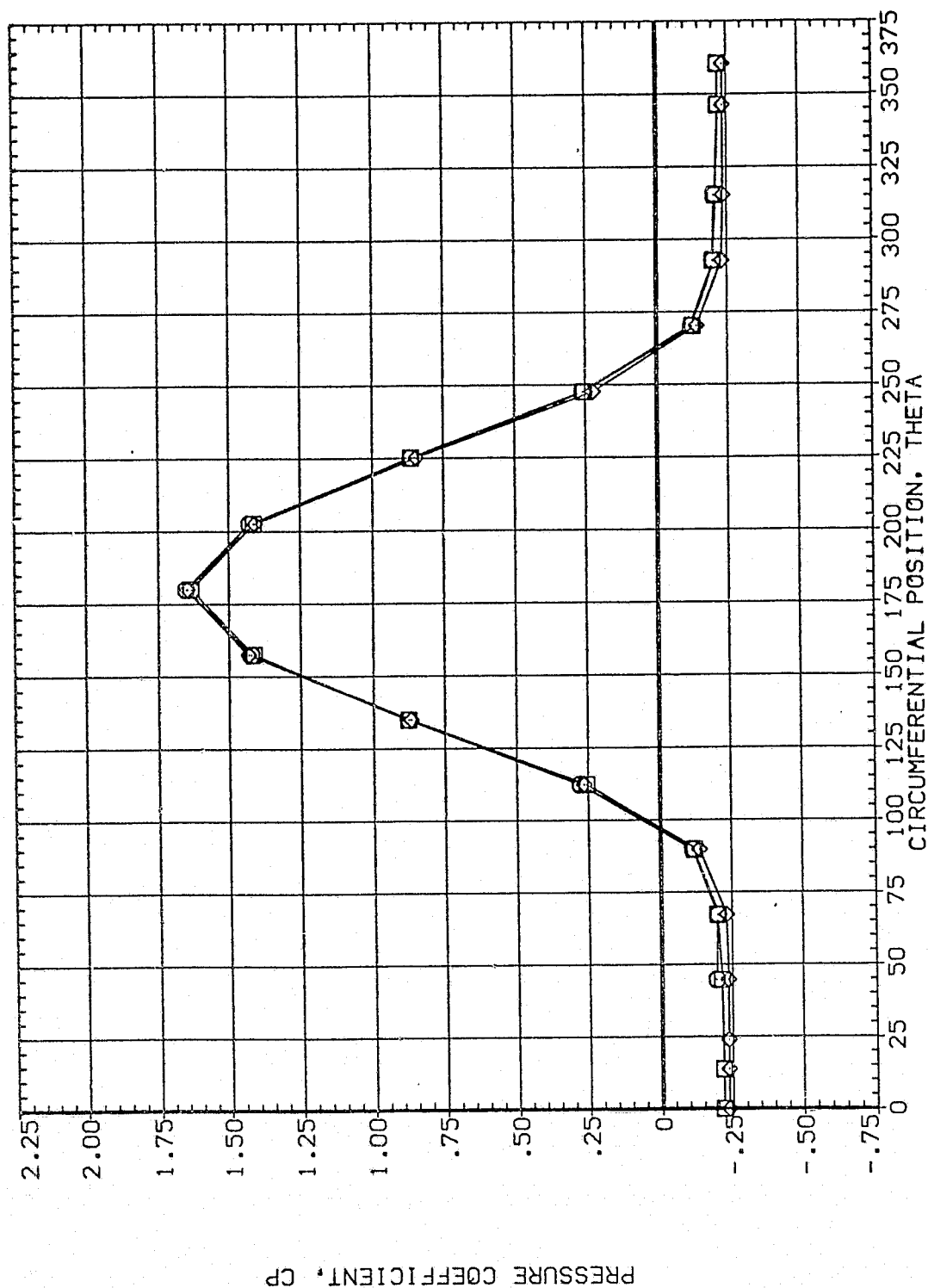


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.00C
 OFFSET PHI 90.000
 .000

SYMBOL X/LB ALPHA MACH
 .892 94.850 1.960
 .923
 .954

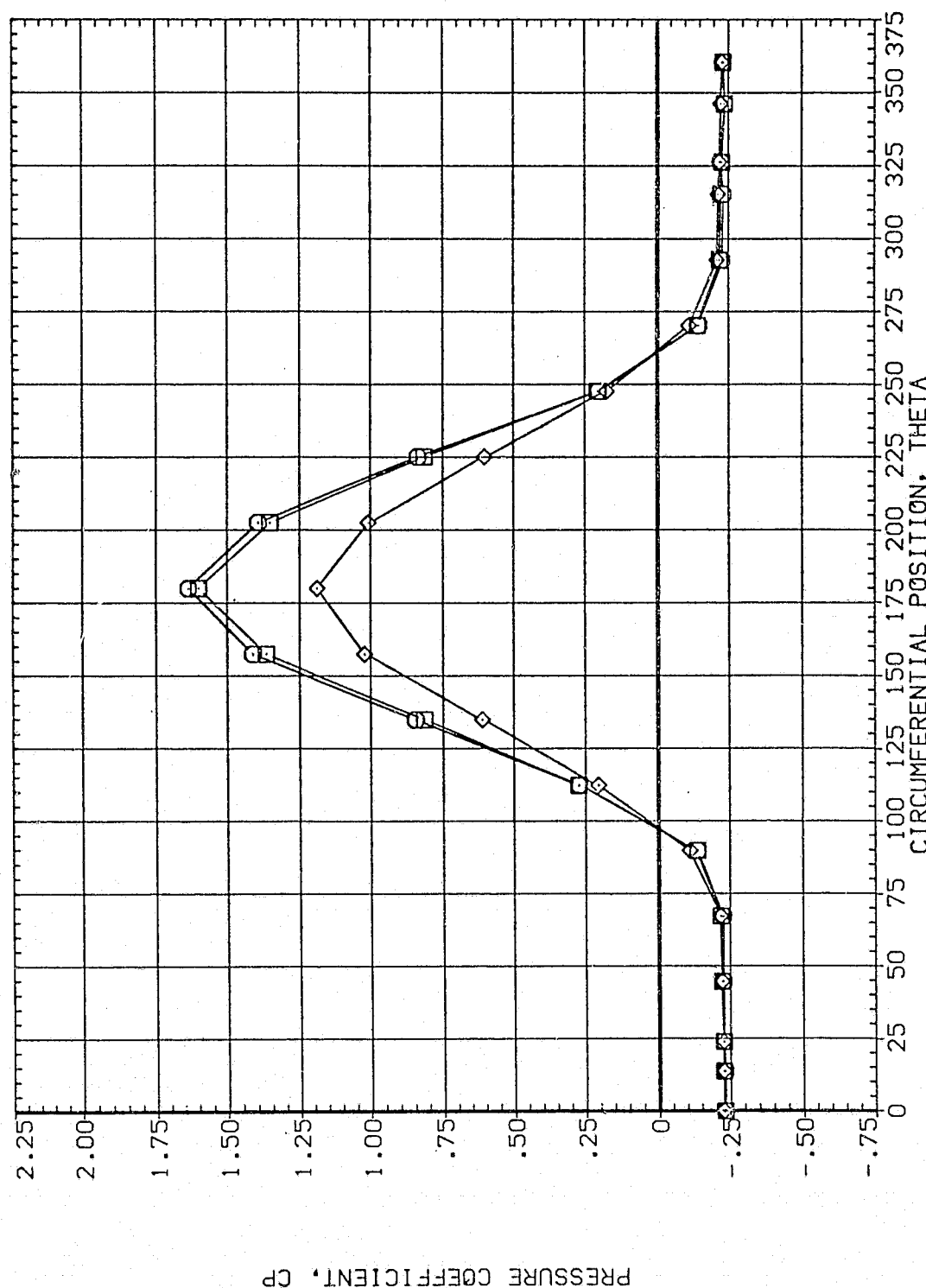


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES



MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
◇	.055	97.850	1.970	2.000	.000	90.000
□	.108					
○	.162					

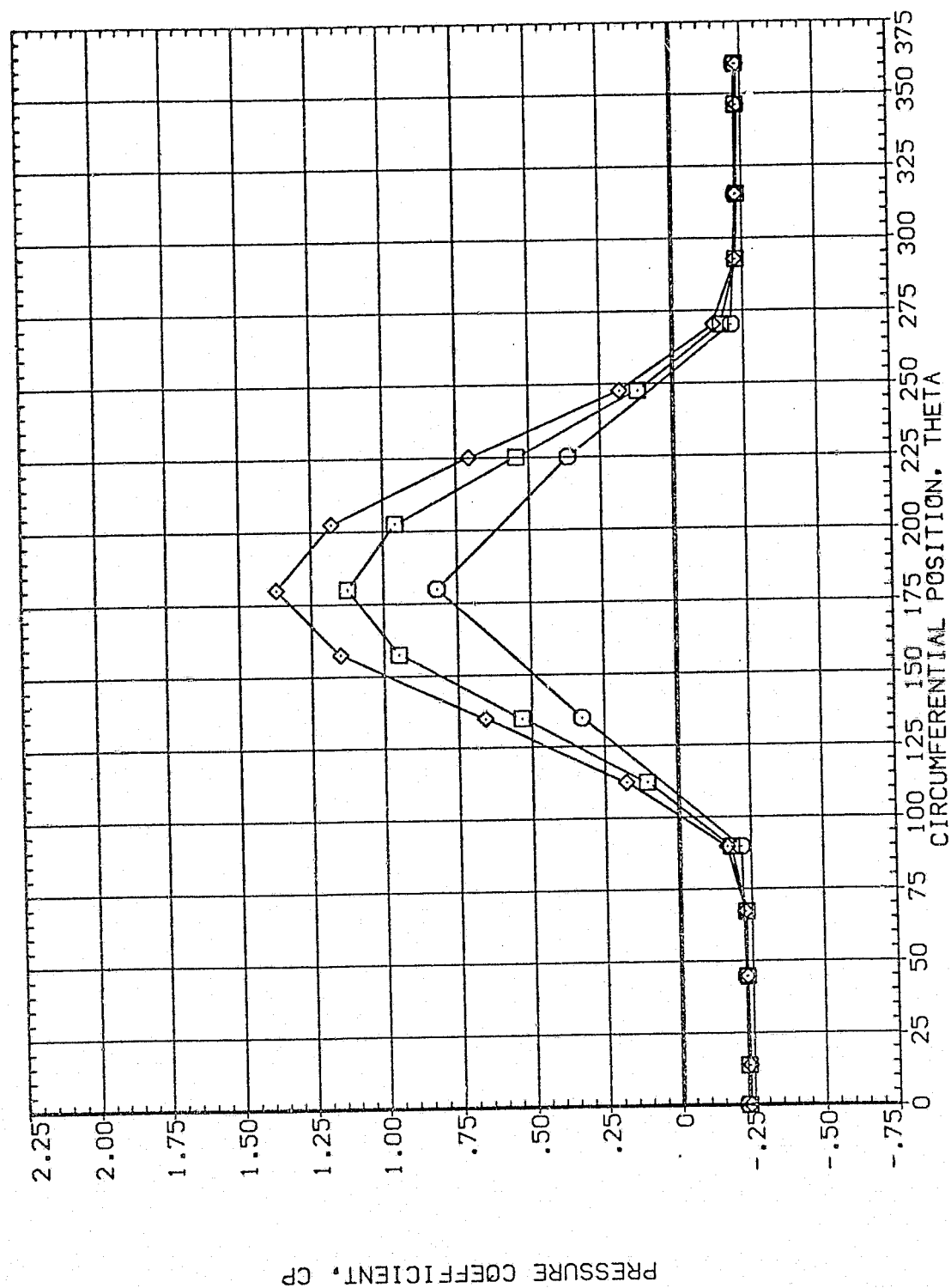


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL X/LB ALPHA MACH
□ .216 97.850 1.970
◇ .322 .518

PARAMETRIC VALUES
BETA .000
HOUNT 2.000
OFFSET PHI .000

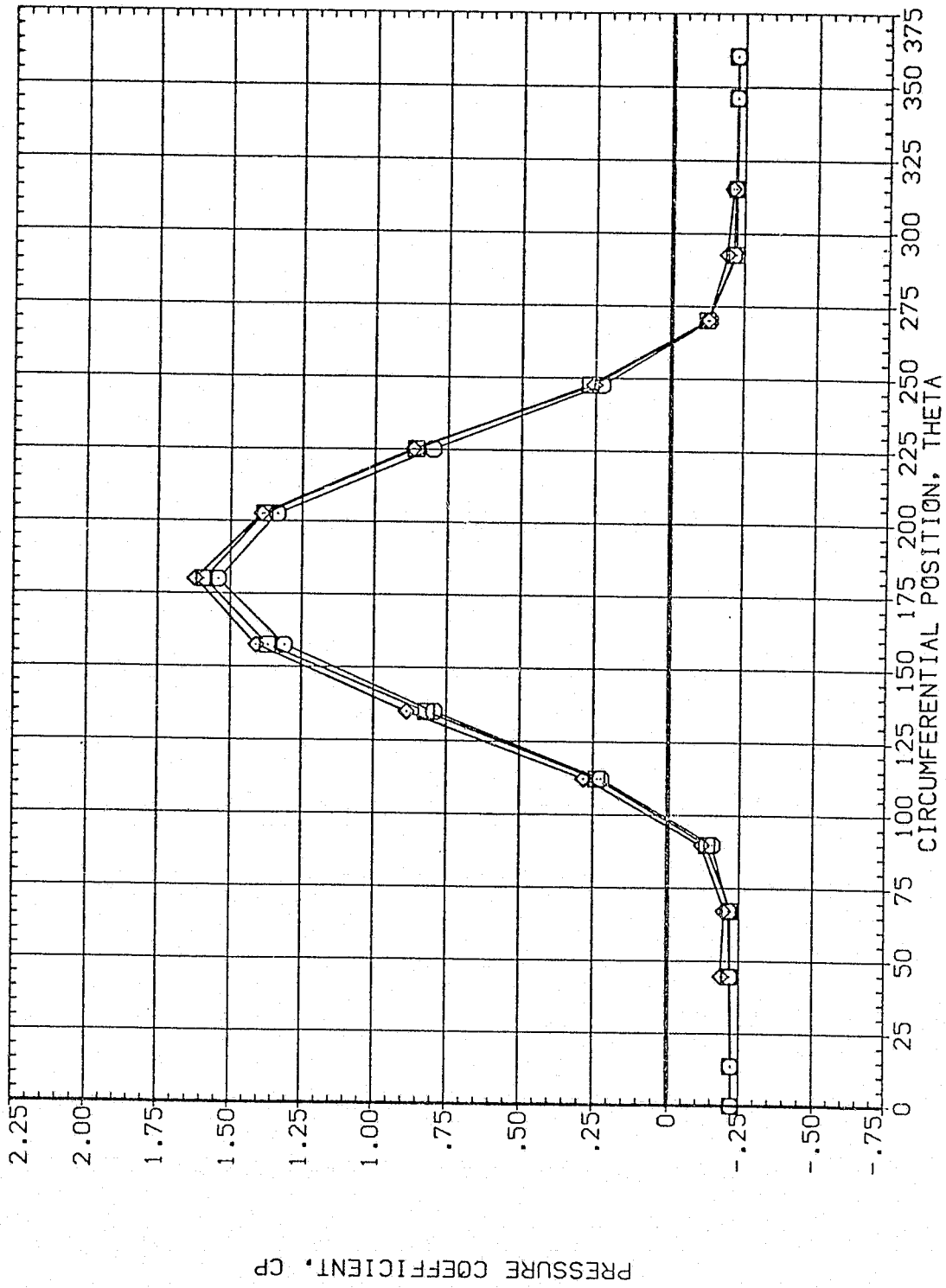


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	97.850	1.970	2.000	.000	.000
□	.735					
◇	.860					

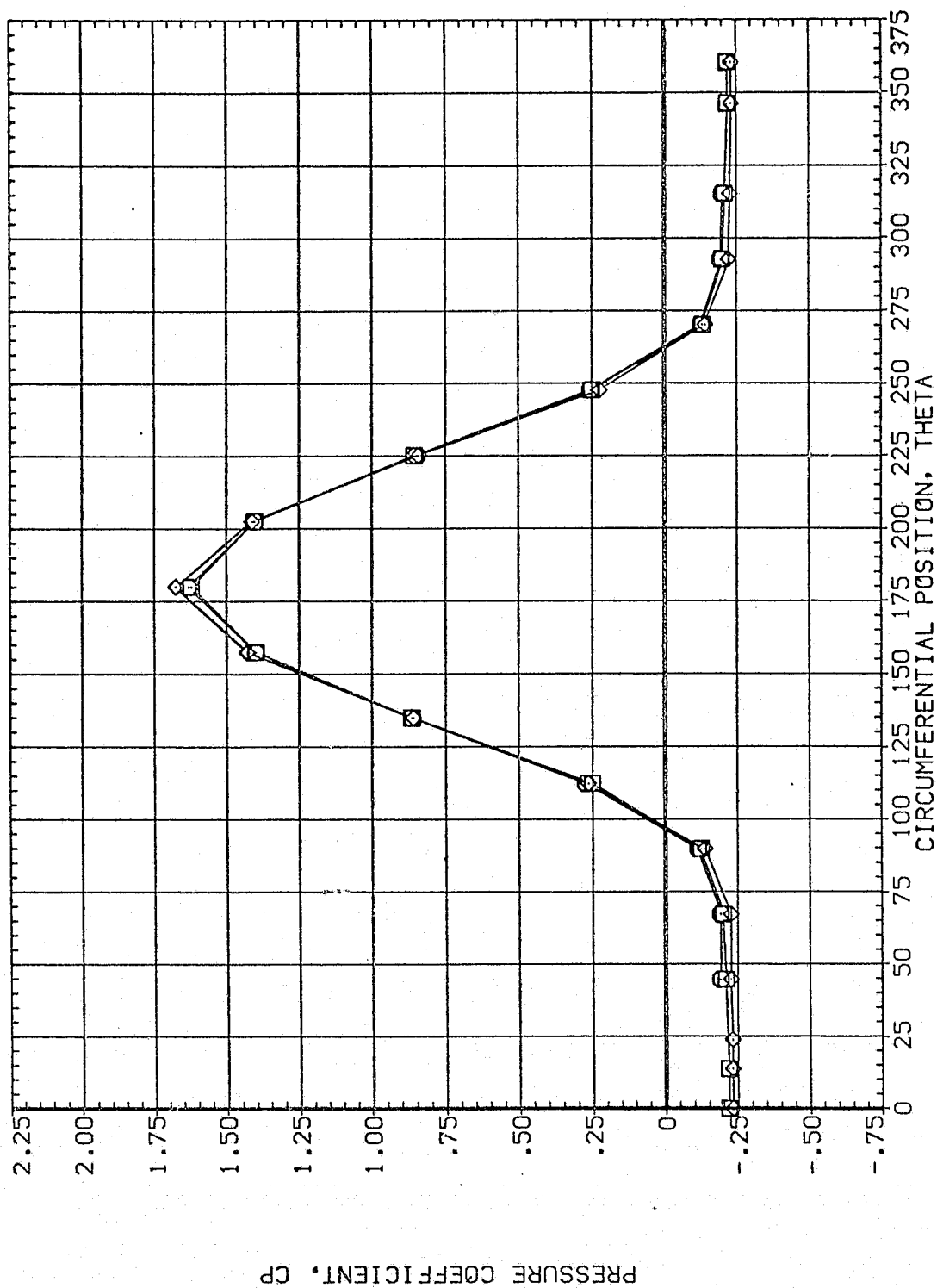


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	.892	97.850	1.970	MOUNT	PHI	.000
□	.923					
◇	.954					

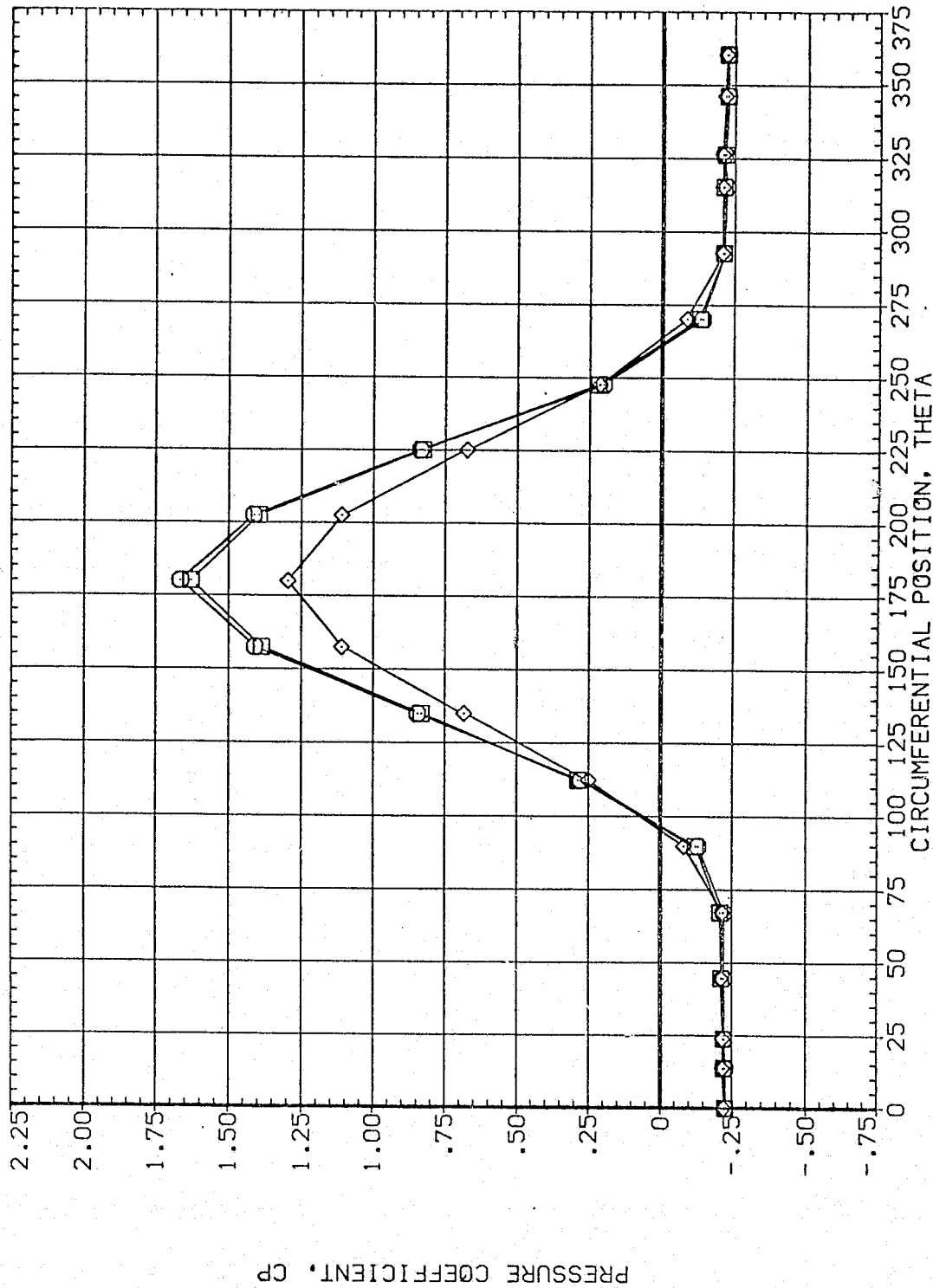


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.055	99.730	1.960	.000	.000	.000
◇	.108			2.000		
◇	.162					

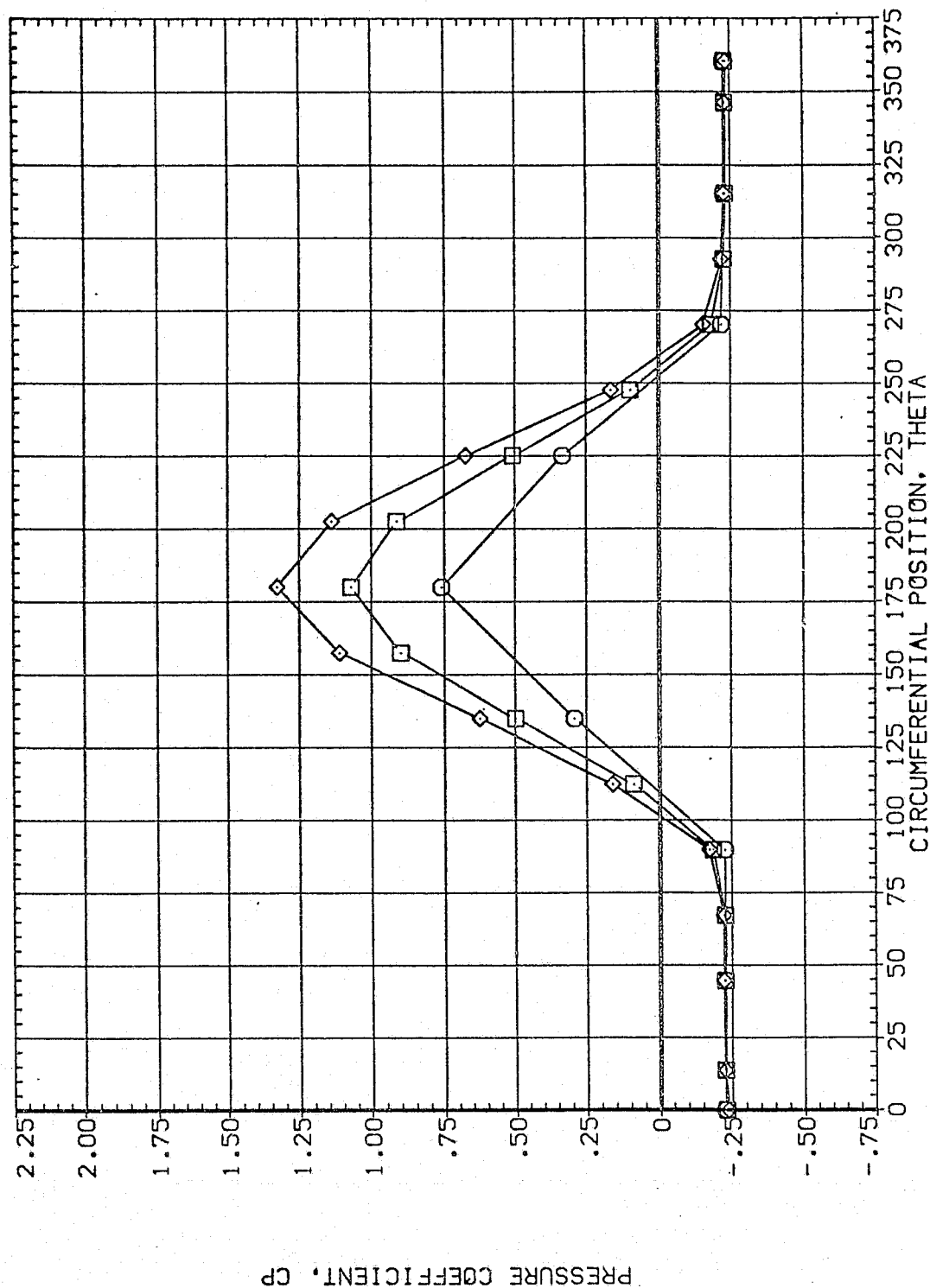


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

SYMBOL X/LB ALPHA MACH
 □ .216
 ○ .322
 ◇ .518

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI .000

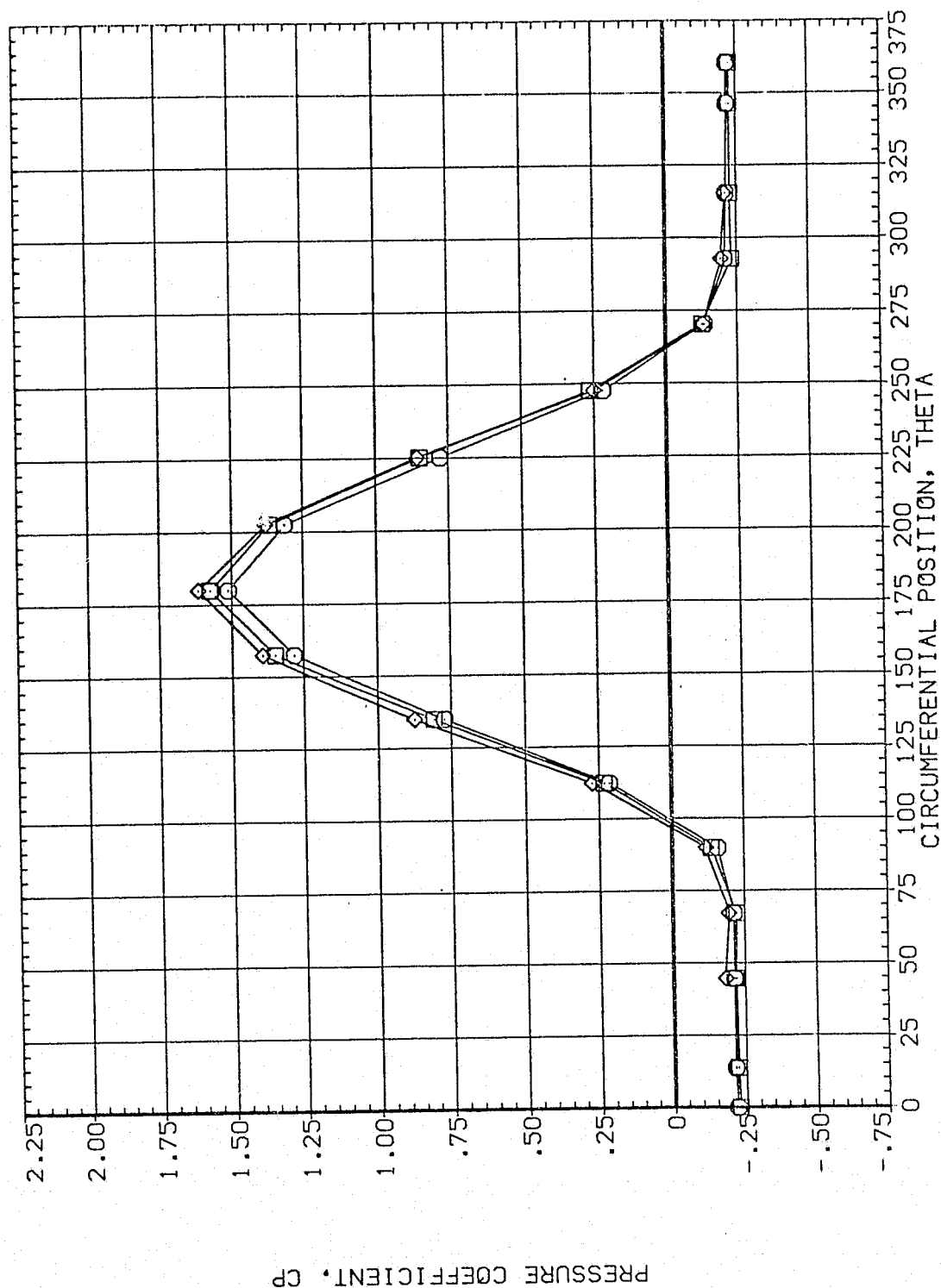


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2518

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2. (P1A080)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	99.730	1.960	MOUNT	.000	.000
□	.735				2.000	
◇	.860					

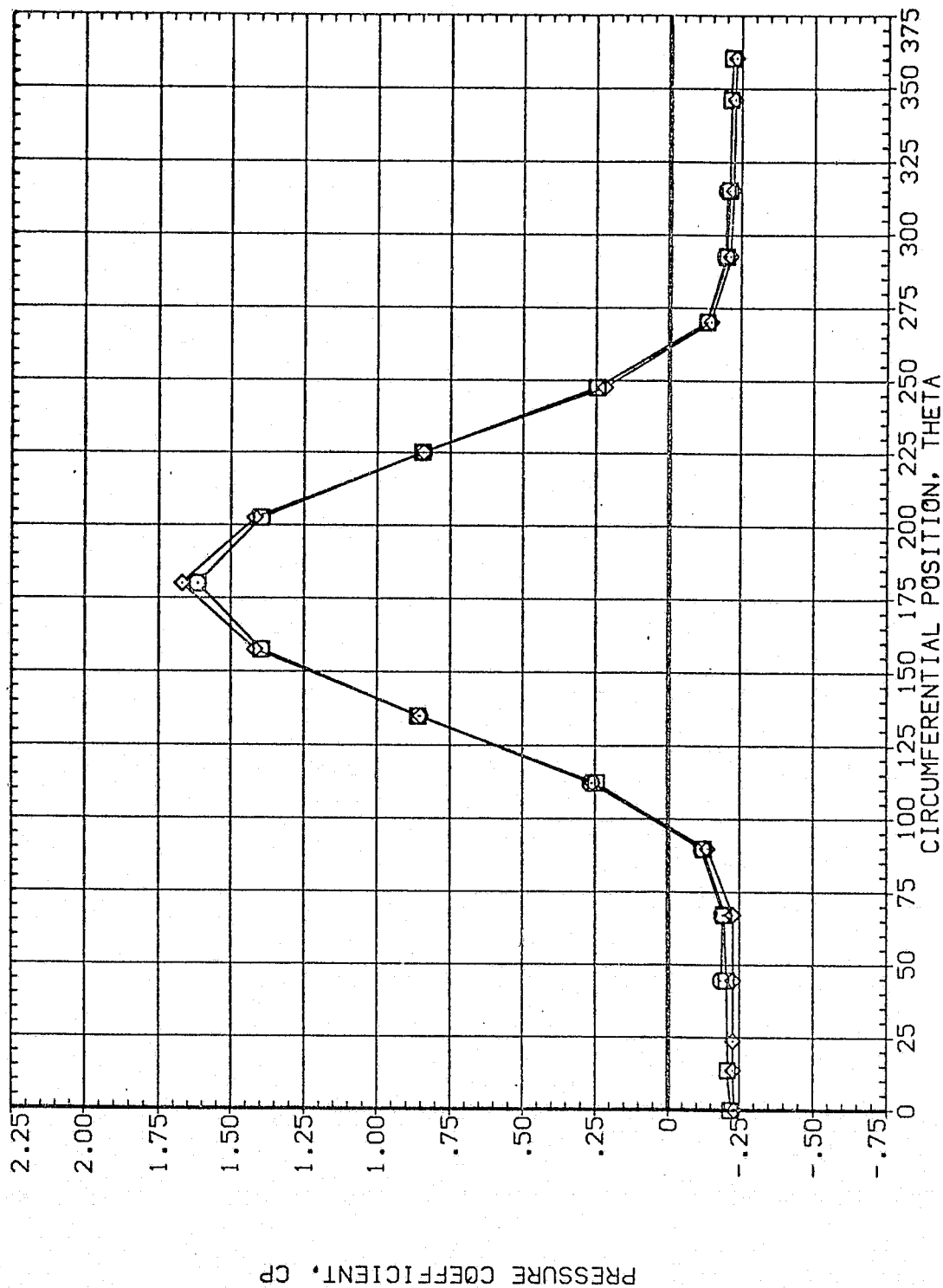


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES			
				BETA	OFFSET		
					MOUNT	PHI	
						90.000	.000
	.892	99.730	1.960	2.000	.000		
	.923						
	.954						

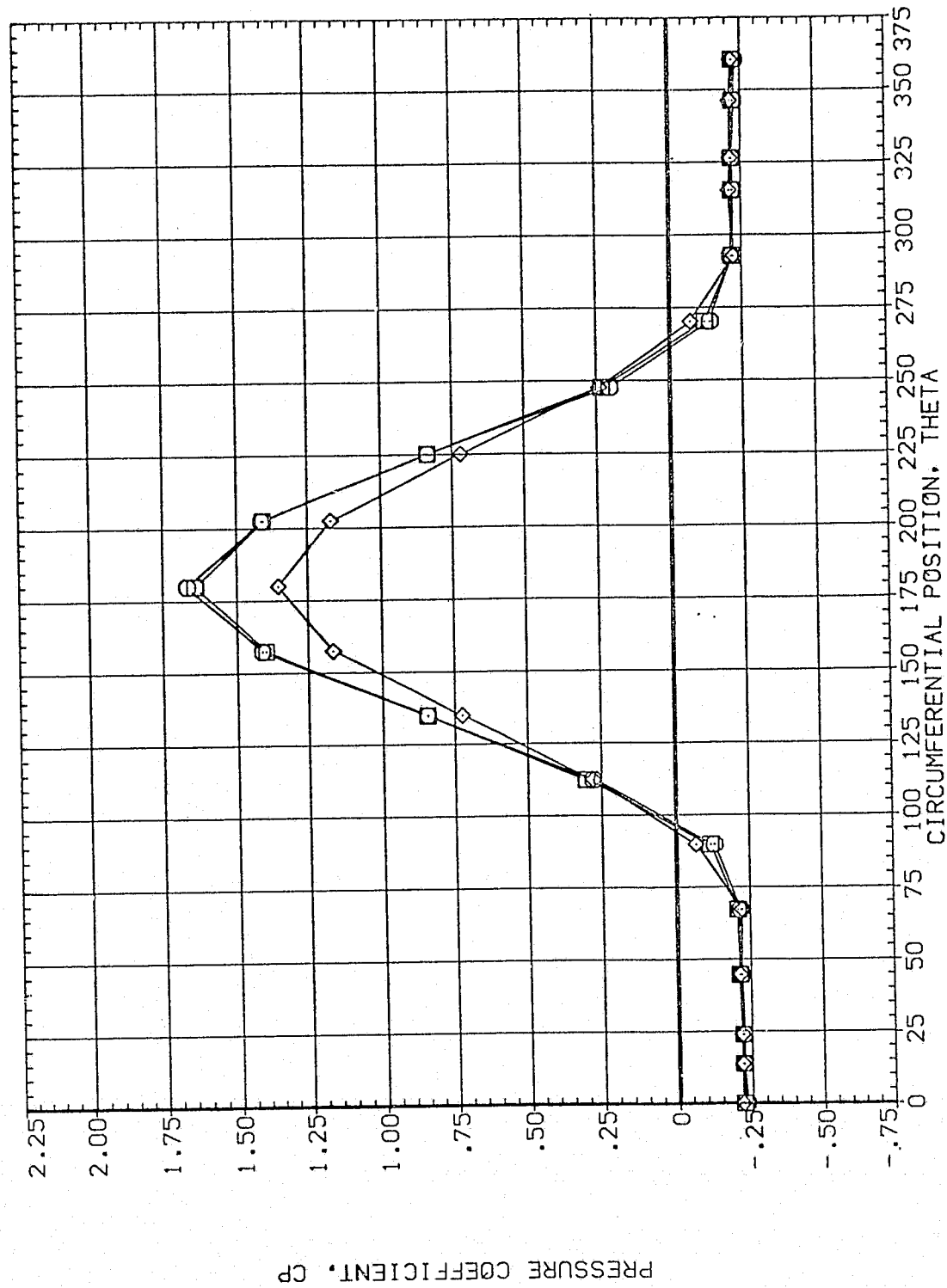


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T2 (P1A061)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
				HEIGHT	2.000	PHI

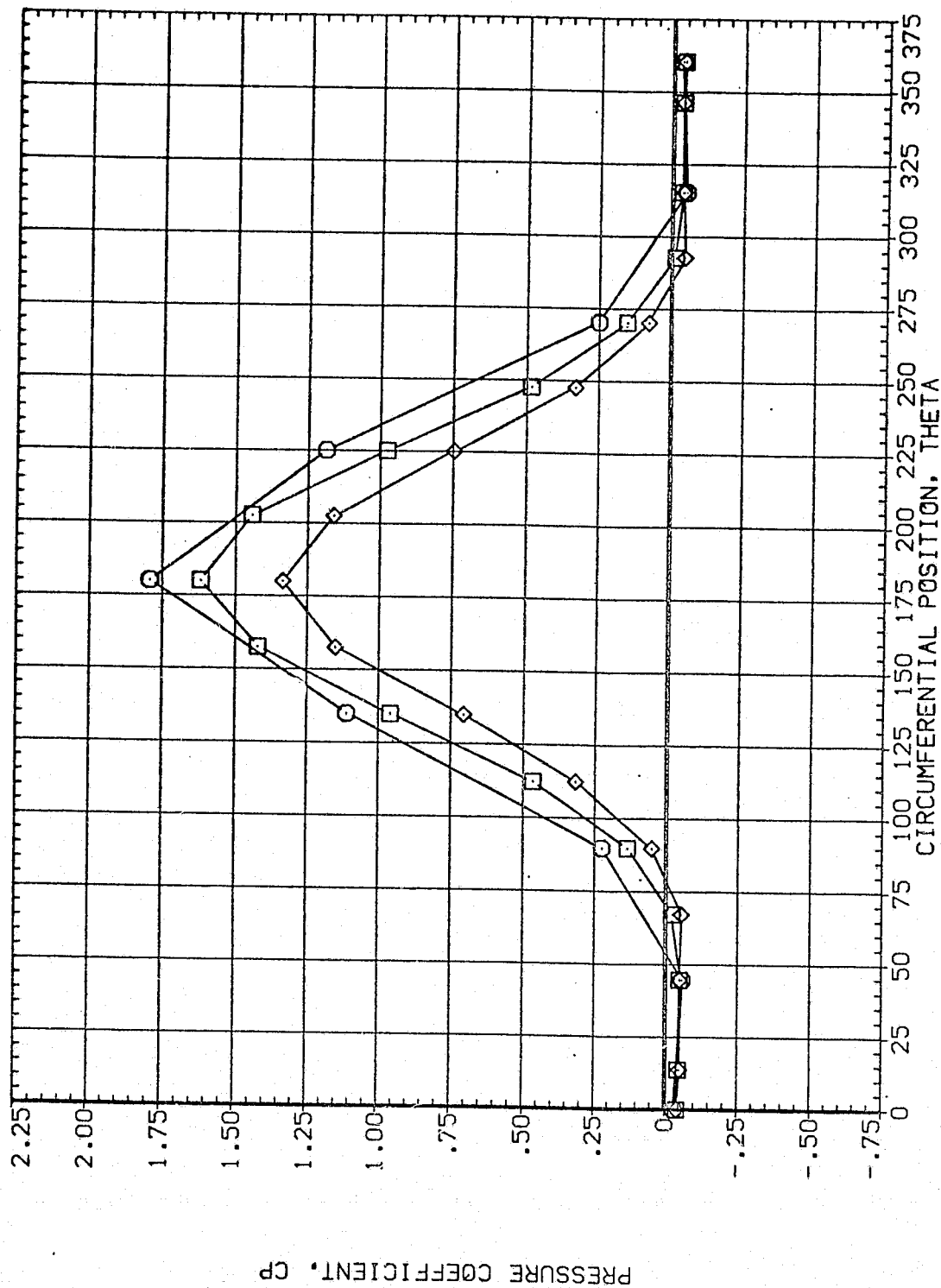


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
				MOUNT	2.000	PHI

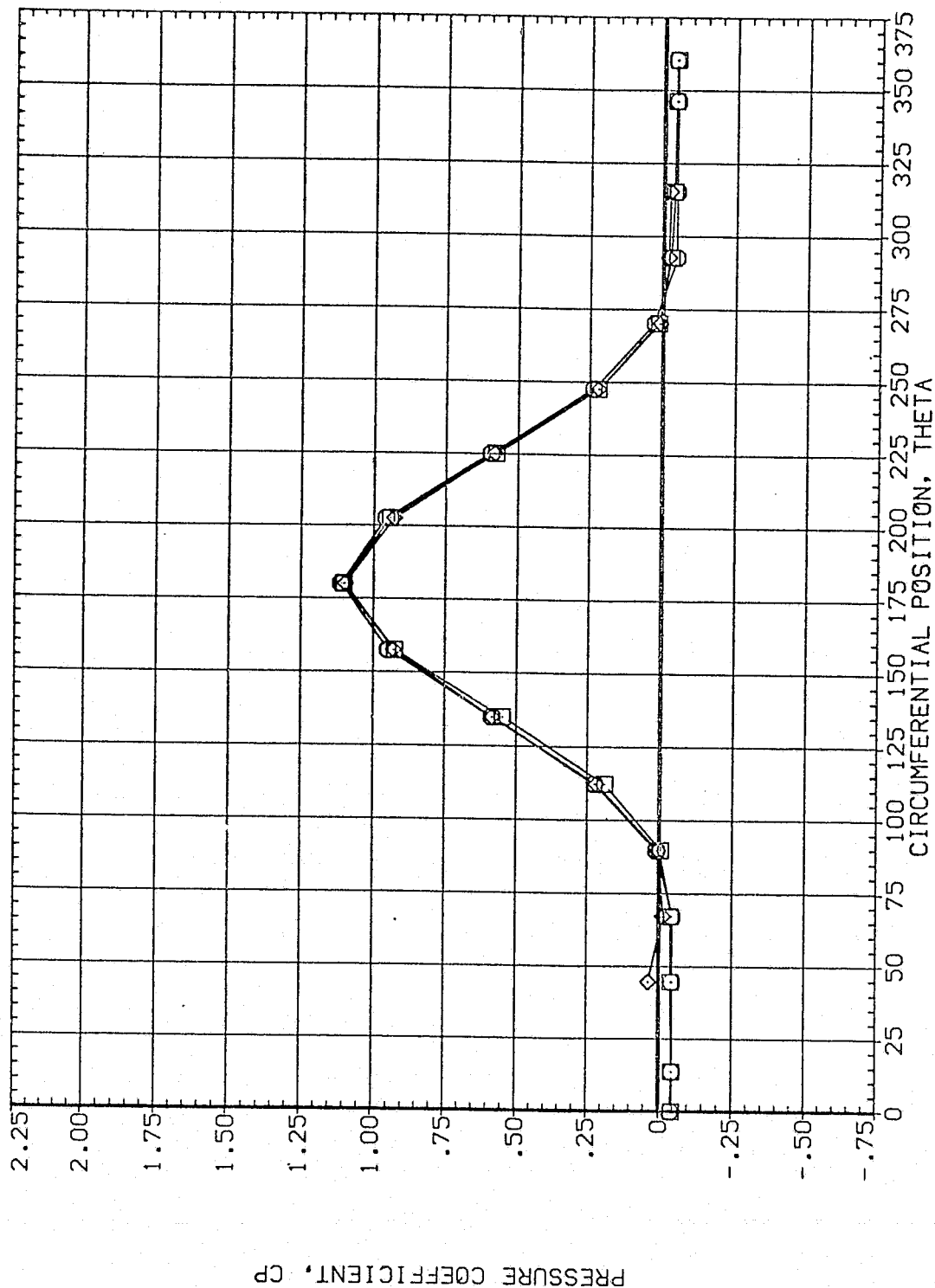


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
◇	.610	51.000	3.480	HOUNT	2.000	PHI
□	.735					.000
◇	.860					

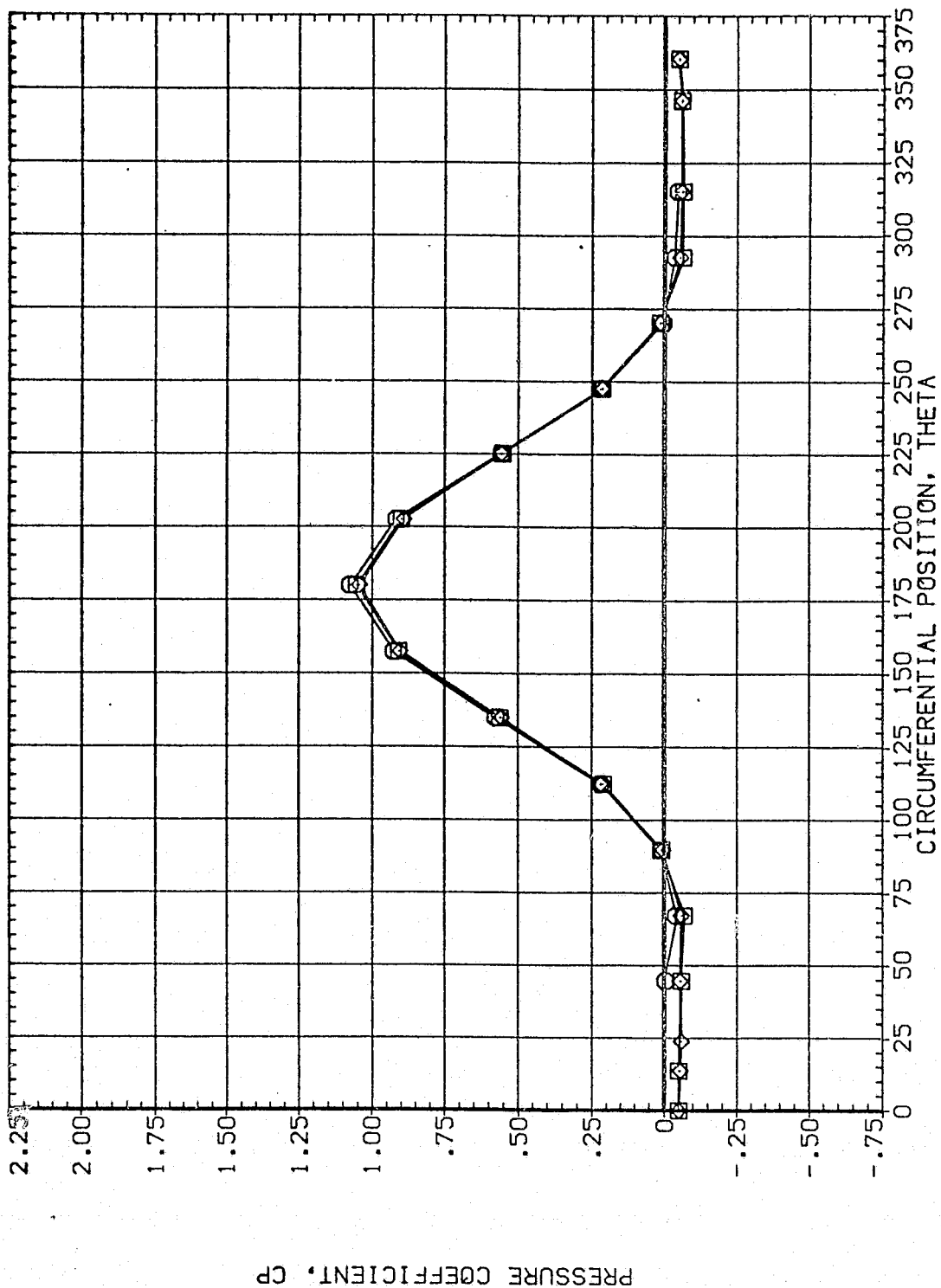


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	.892	51.000	3.480	MOUNT	.000 OFFSET
◇	.923				2.000 PHI
	.954				60.000

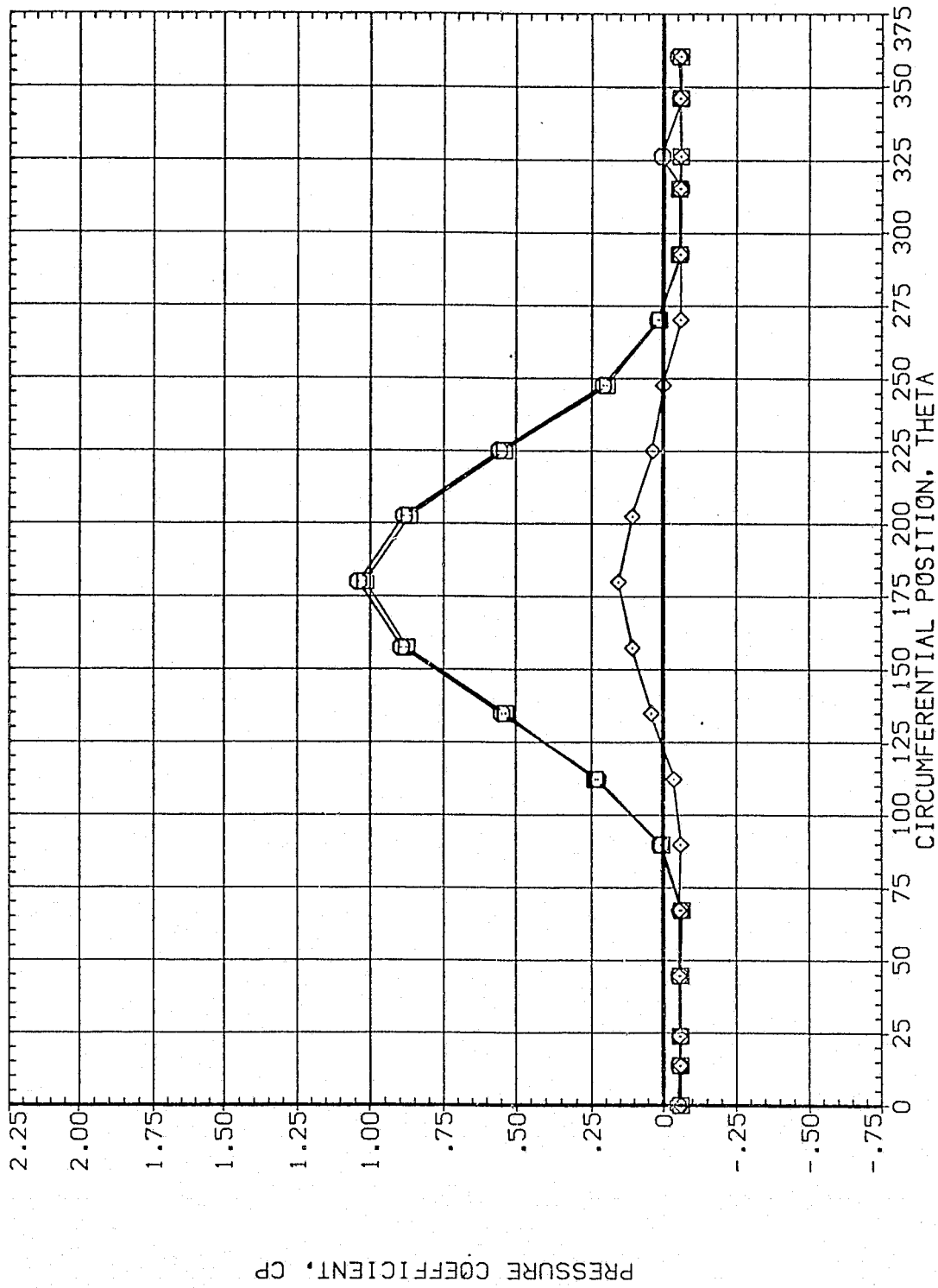


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T2 (P1A062)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSEY	PHI
○	.055	54.130	3.480	MOUNT	.000	60.000
□	.108				2.000	
◇	.162					.000

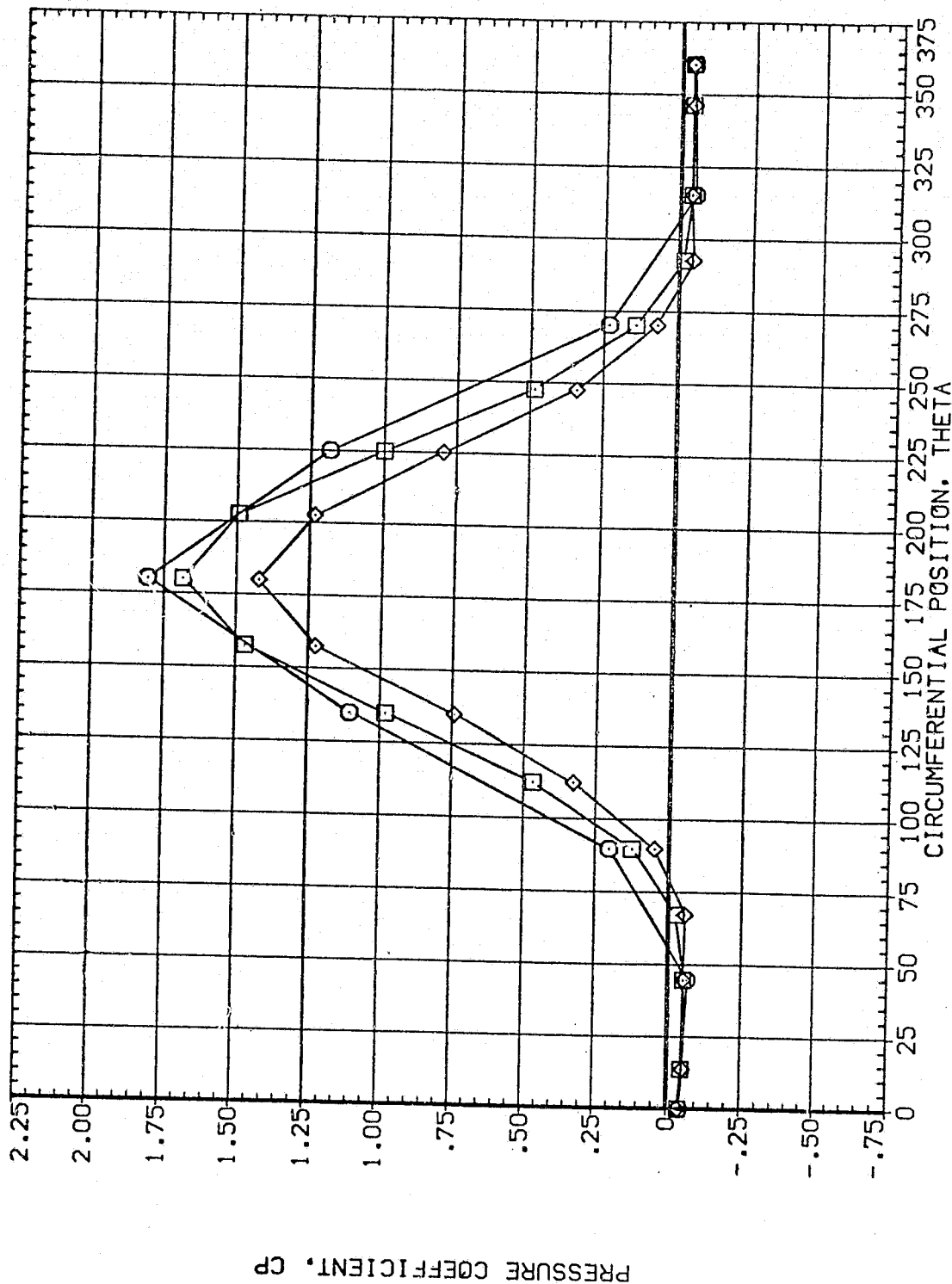


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTRUDANCES

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PARAMETRIC VALUES
BETA .000
MOUNT 2.000
PHI 60.000
OFFSET .000

ALPHA 54.130
MACH 3.480

SYMBOL
X/LB .216
.322
.518

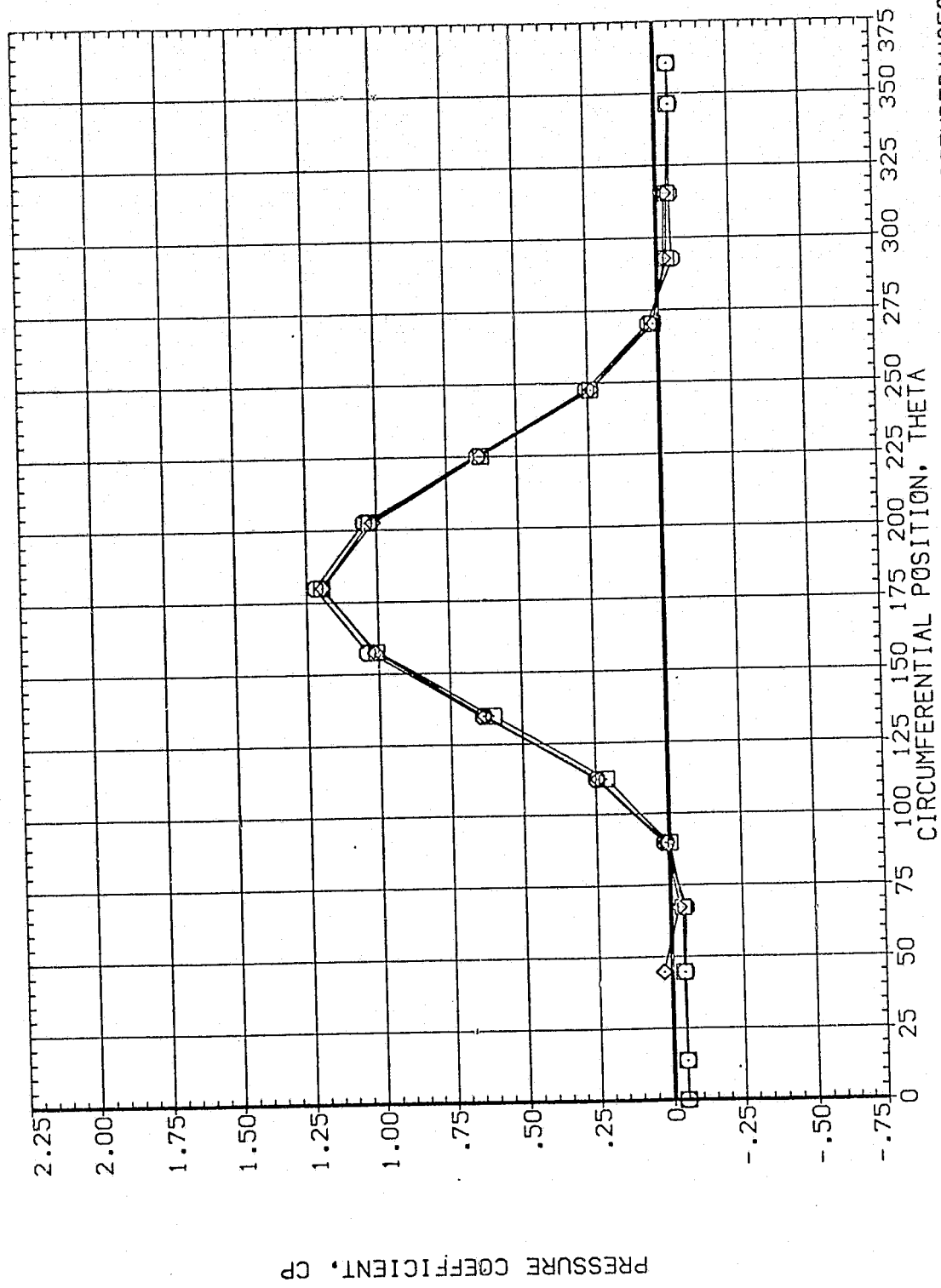


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2526



(6)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
	.610	54.130	3.480	MDUNT	.000	.000
□	.735				2.000	
◇	.860					

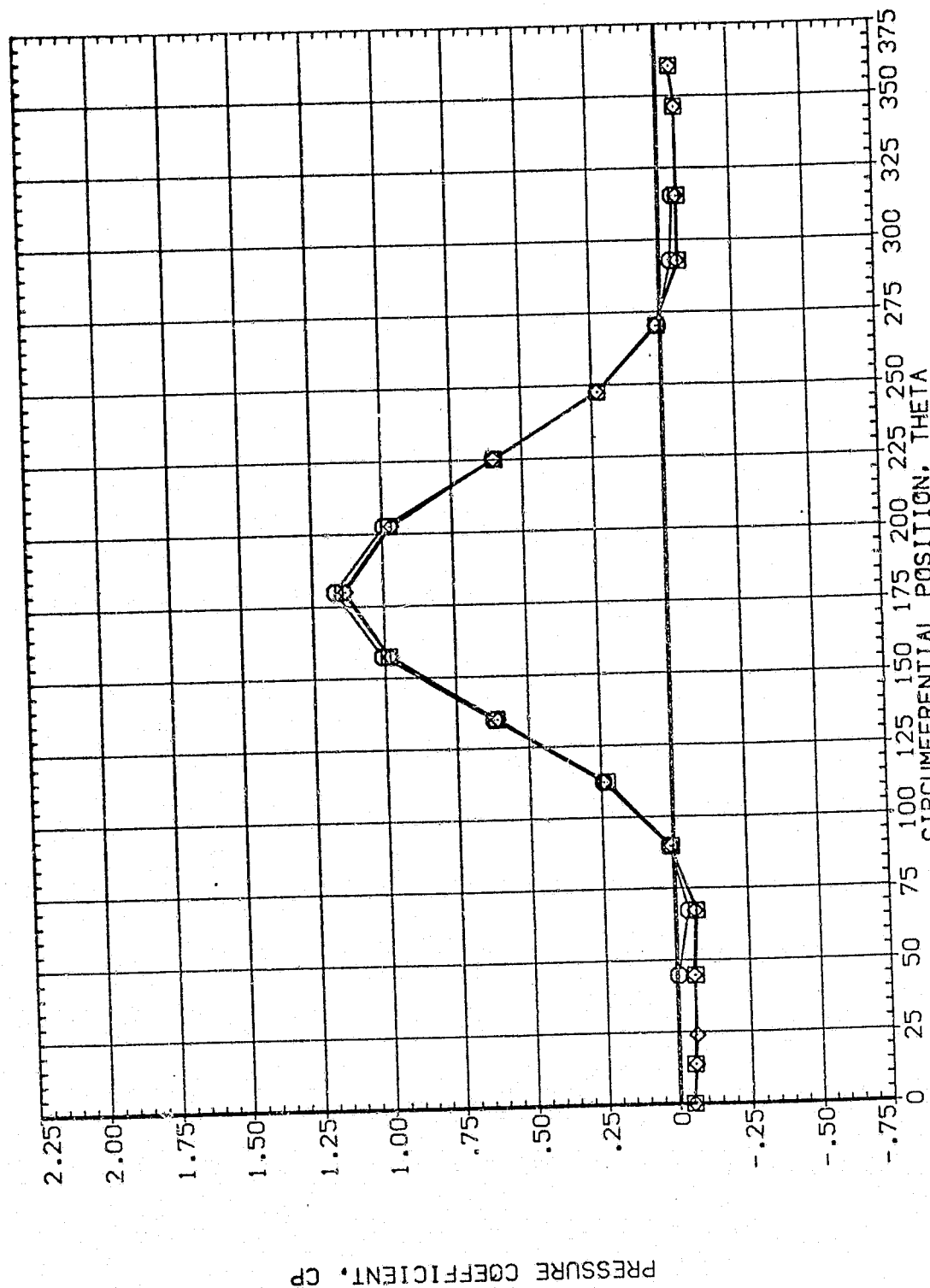


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	.892	54.130	3.480	MOUNT	.000 OFFSET
◇	.923				2.000 PHI
	.954				60.000

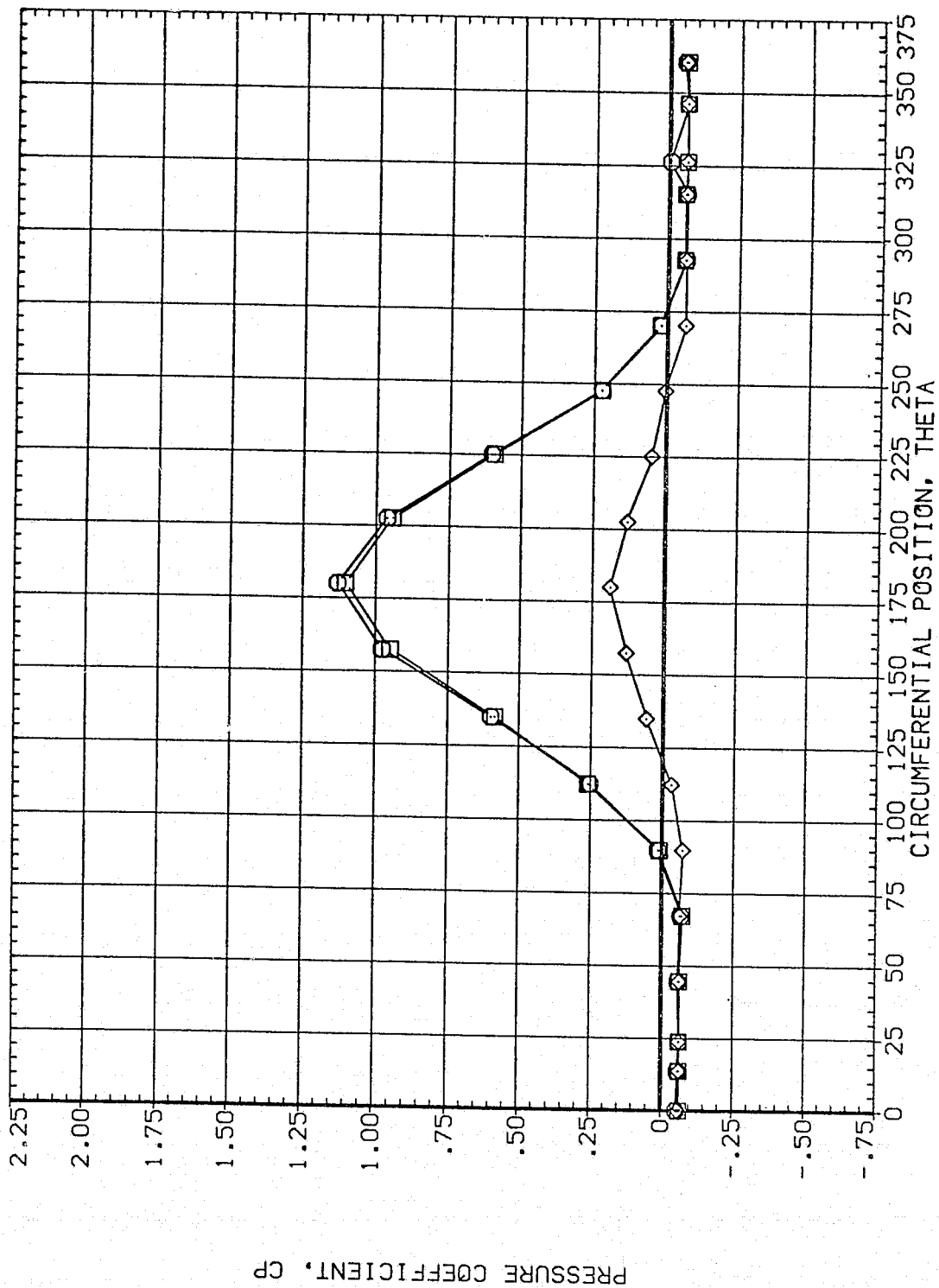


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
					MOUNT	PHI
○	.055	57.130	3.480			
□	.108					
◇	.162					

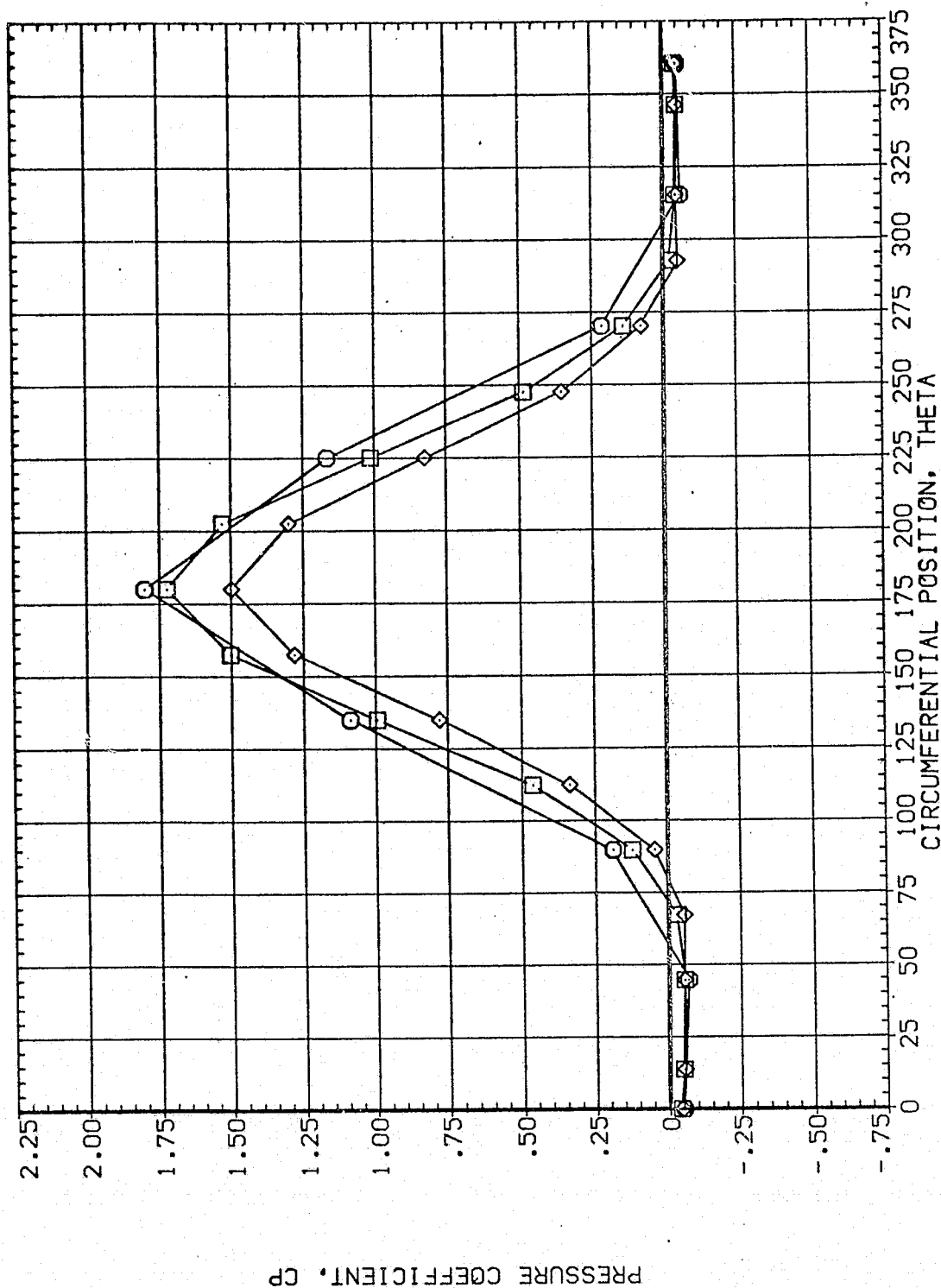


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
				MOUNT	PHI	.000
□	.216	57.130	3.480	.000	2.000	.000
◇	.322					
◇	.518					

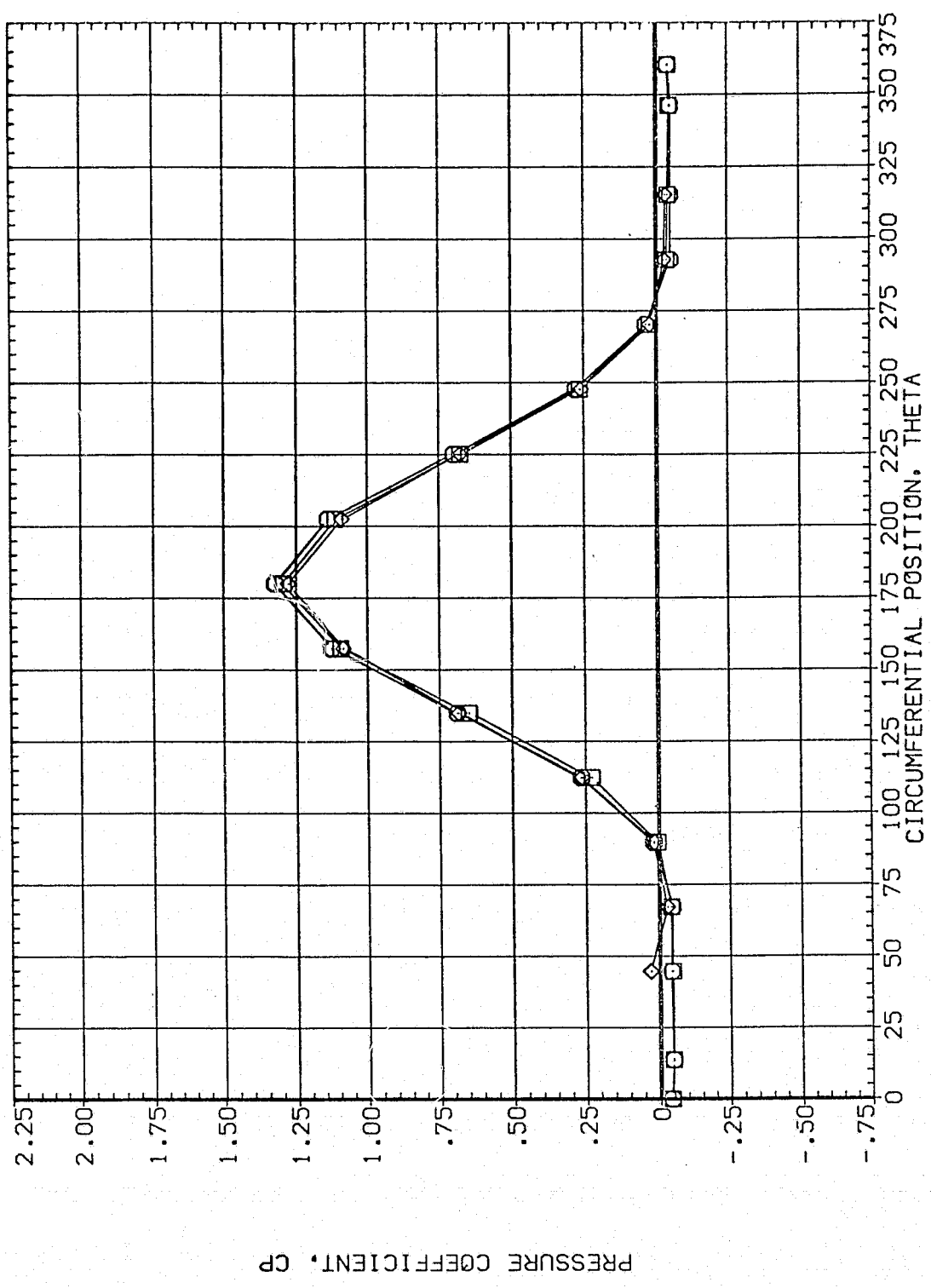


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES



MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL X/LB ALPHA MACH
○ .610 57.130 3.480
□ .735
◇ .860

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
OFFSET PHI 60.000
60.000

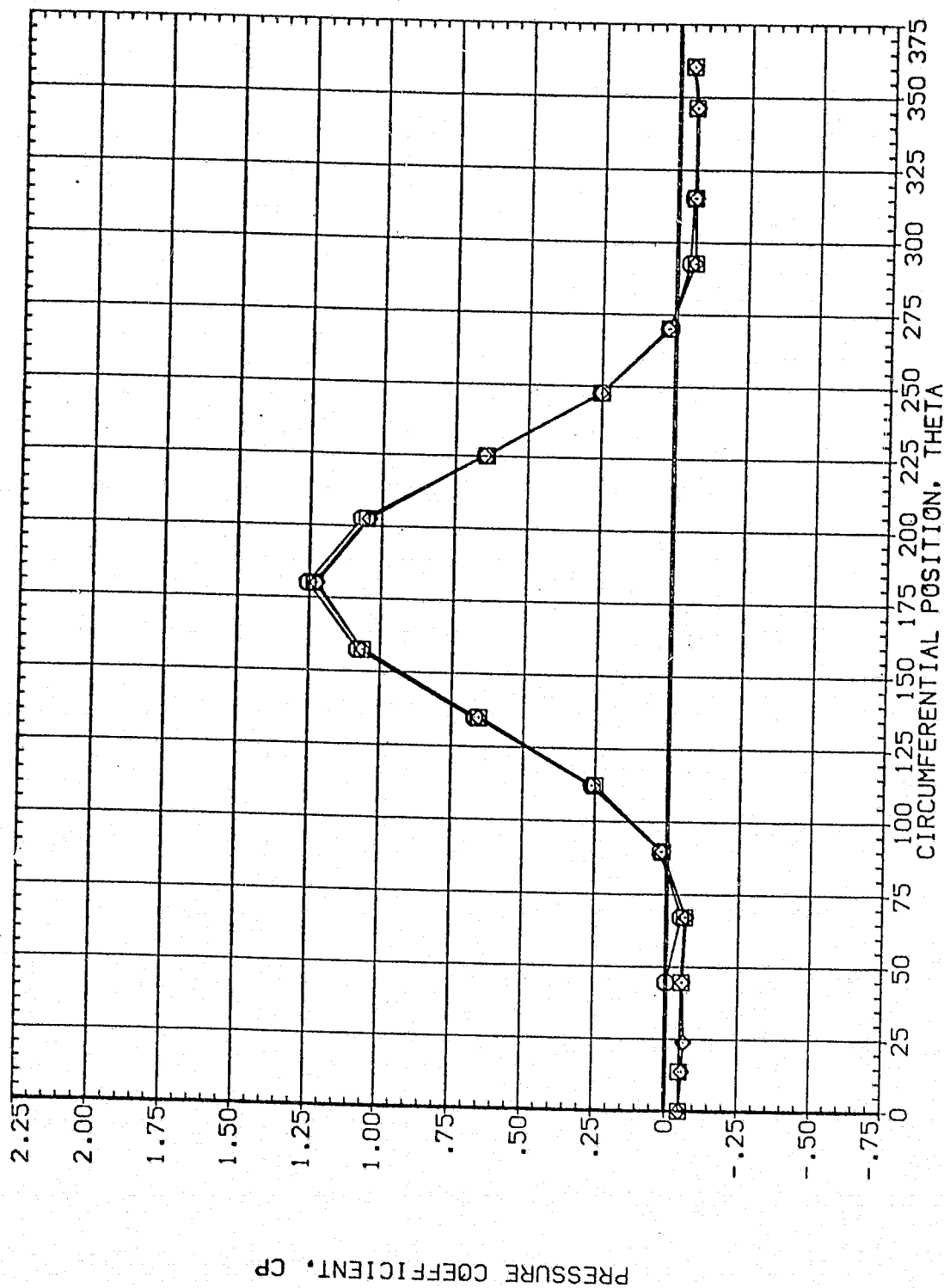


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2531

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
	.892	57.130	3.480	BETA	.000	OFFSET
	.923			MOUNT	2.000	PHI
	.954					60.000

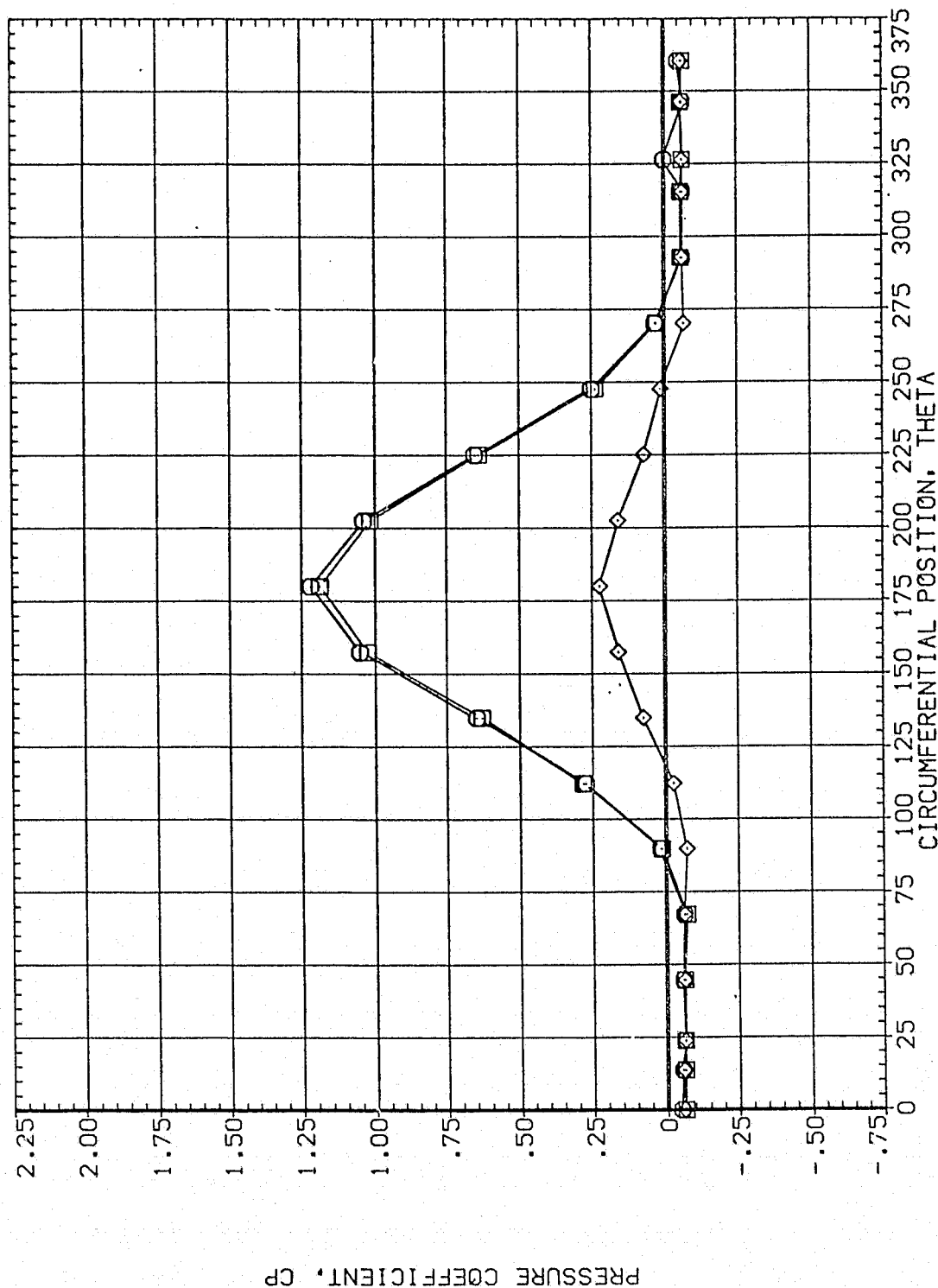


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	60.130	3.480	2.000	.000	.000
□	.108					
◇	.162					

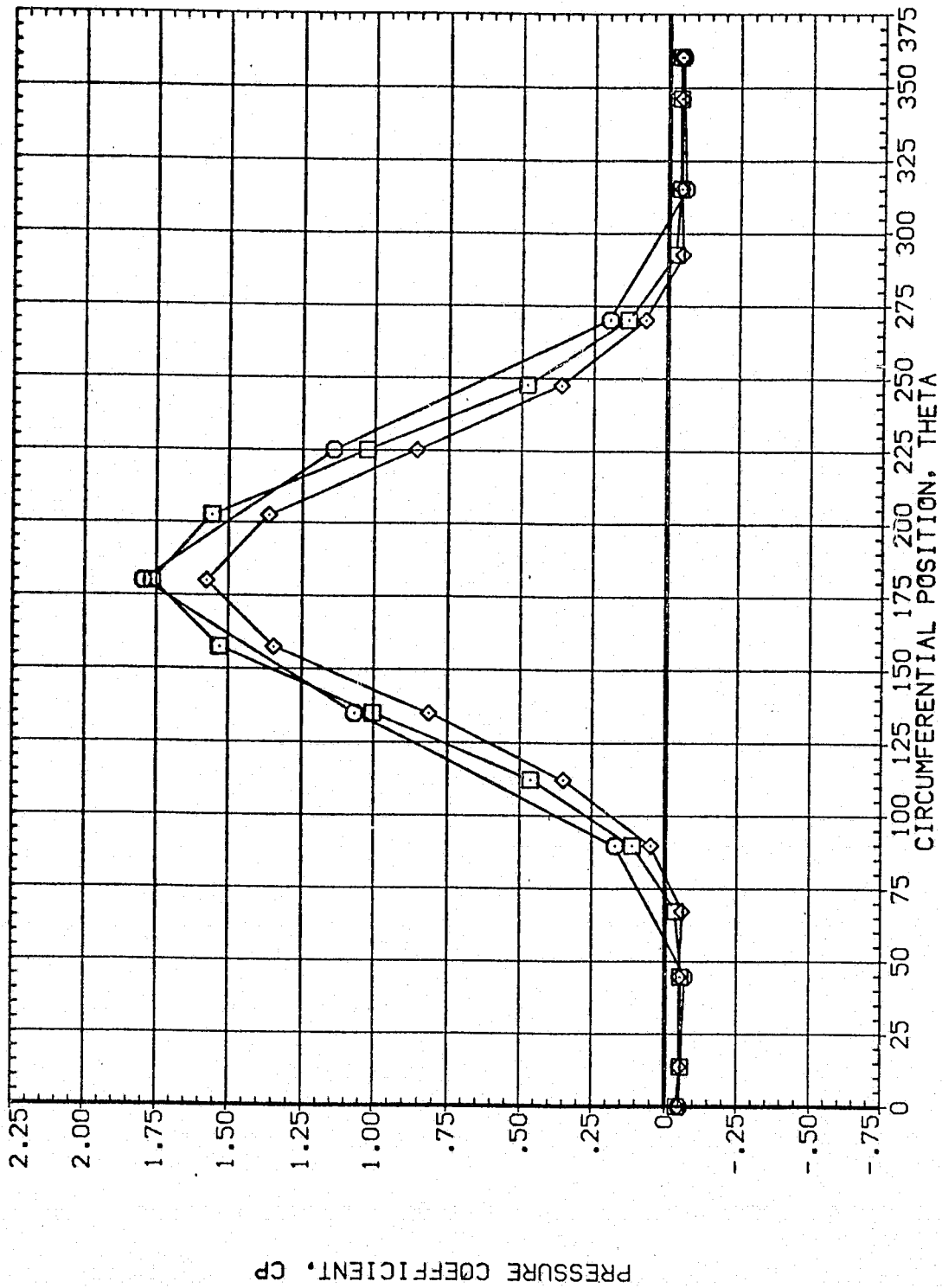


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.216	60.130	3.480	MMOUNT	.000 OFFSET
□	.322				2.000 PHI
◇	.518				60.000

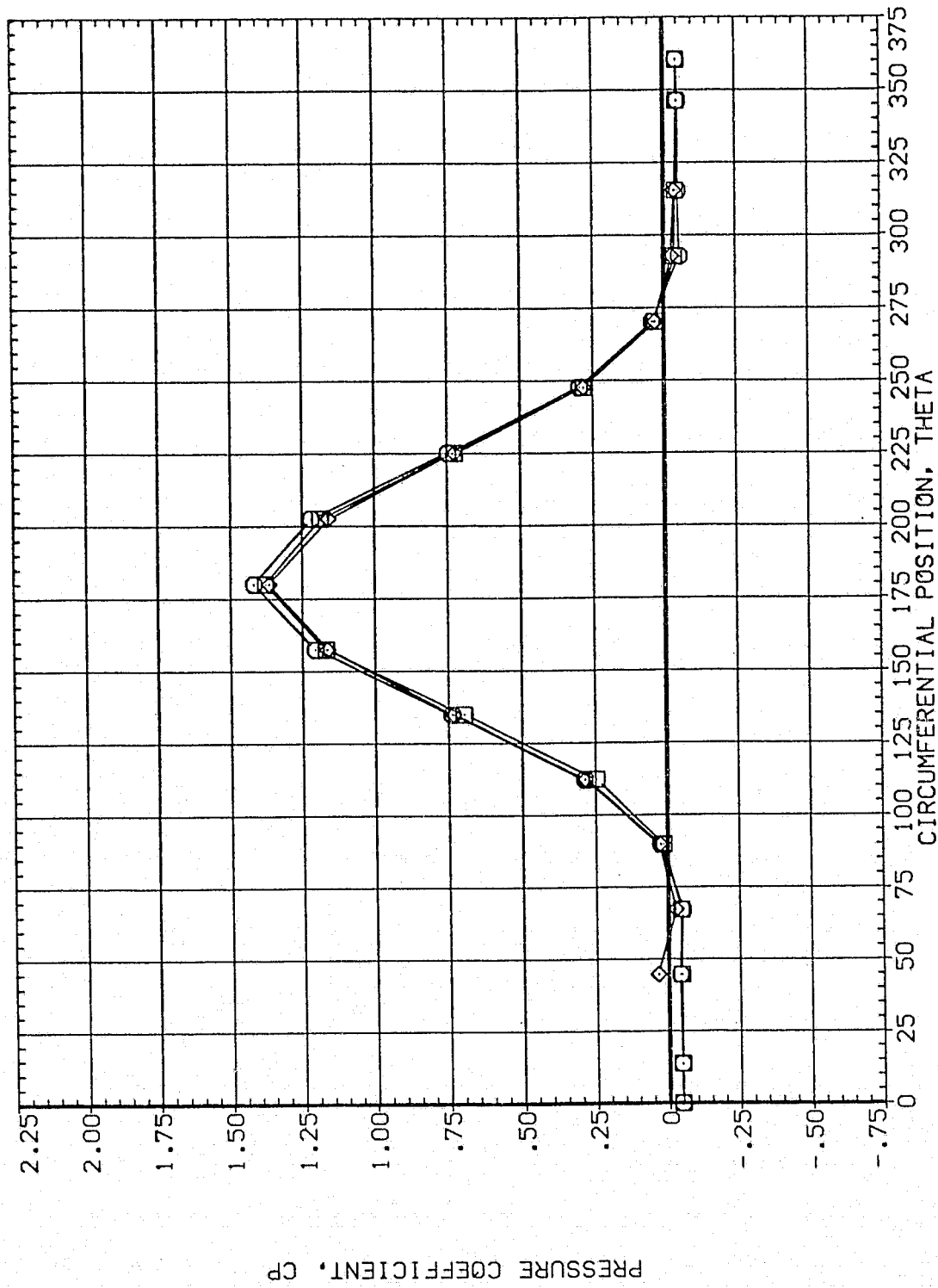


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2534

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

PARAMETRIC VALUES
 .000 OFFSET
 60.000 PHI
 2.000
 .000

BETA MOUNT
 .000
 2.000
 .000

SYMBOL X/LB ALPHA MACH
 .610 60.130 3.480
 .735
 .860

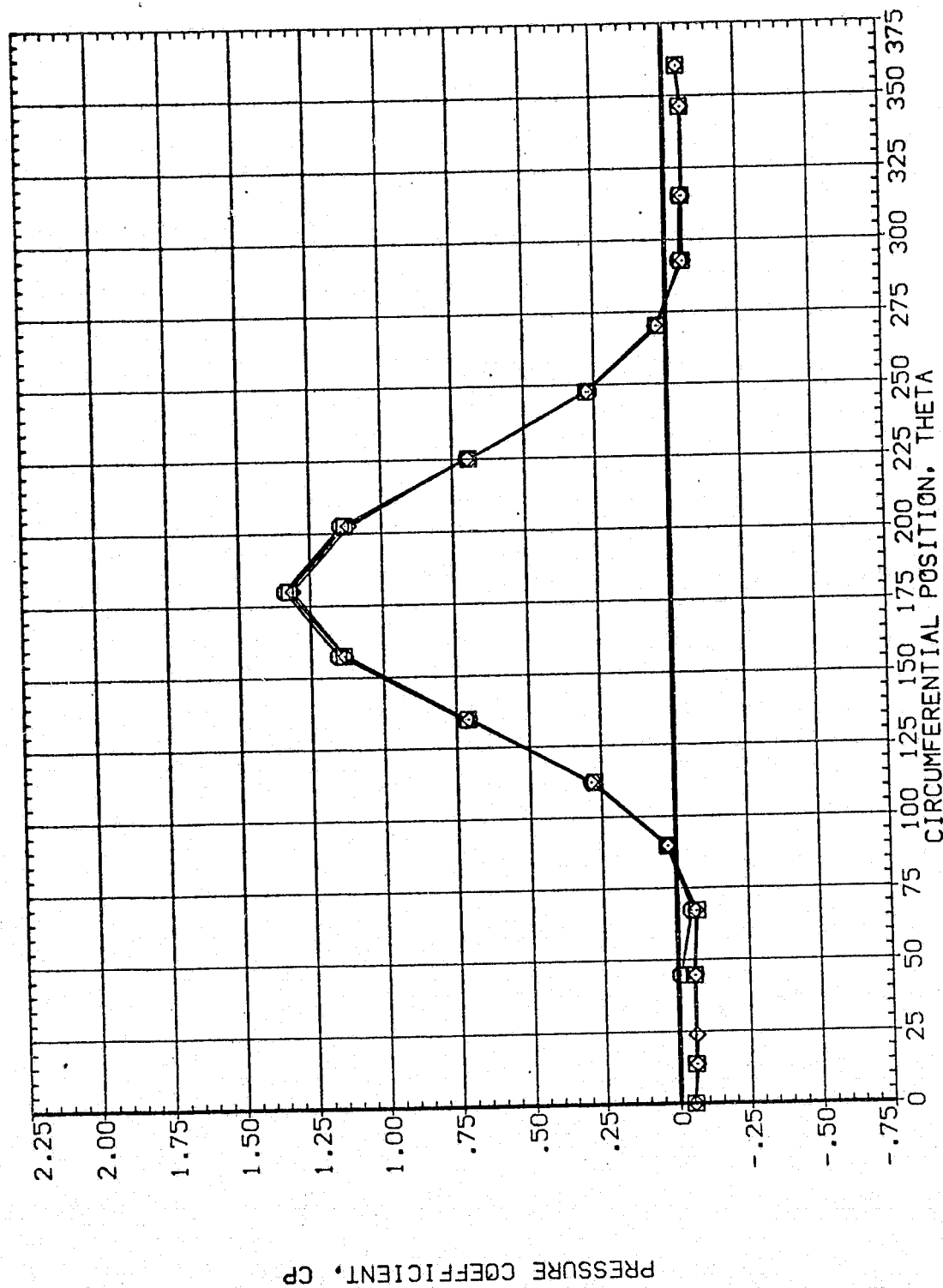


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2535

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A064)

SYMBOL
 ○ □ ◇

X/LB .892
 ALPHA 60.130
 MACH 3.480
 .923
 .954

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 60.000
 .000

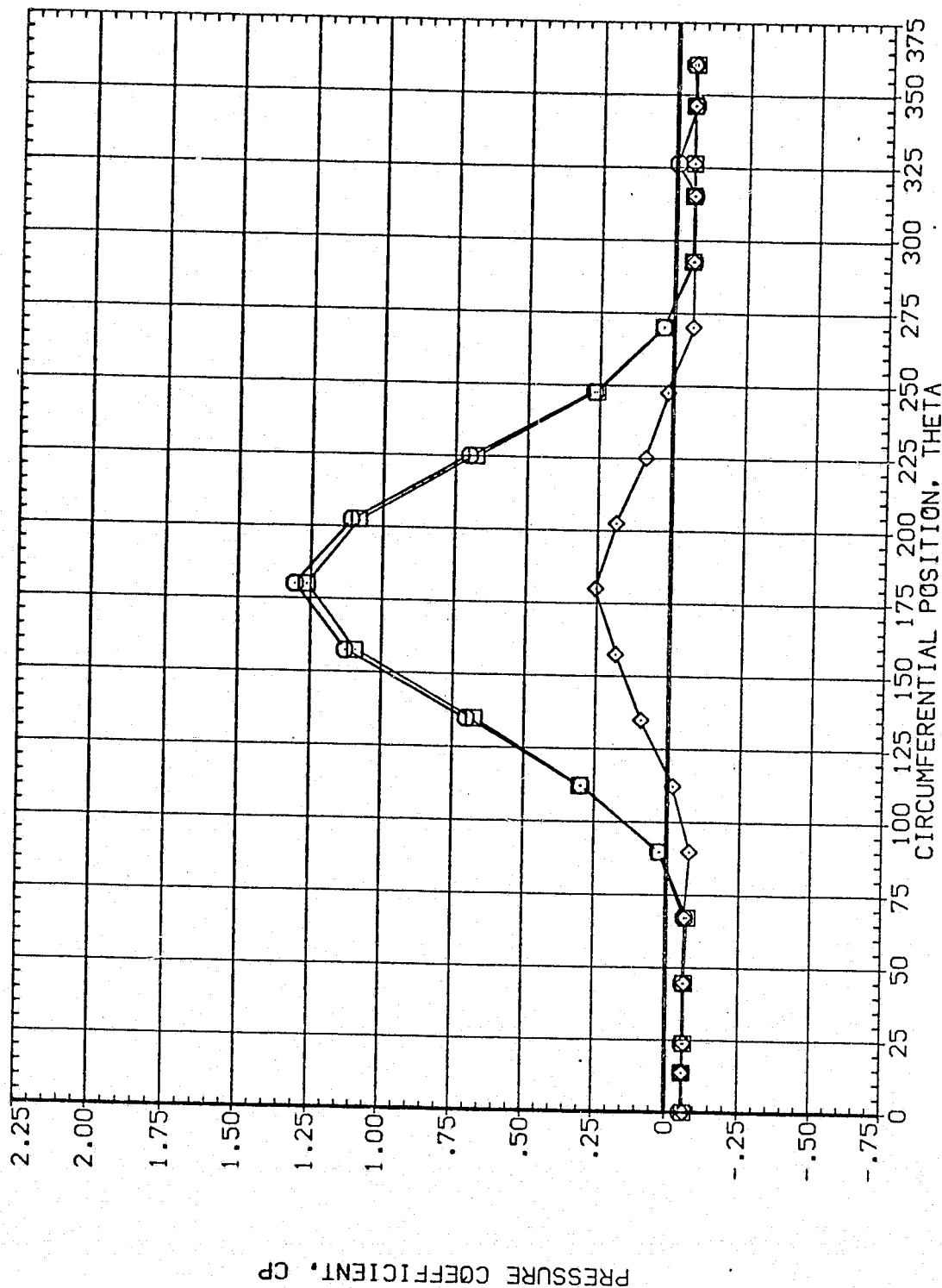


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.055	63.130	3.480	MOUNT	.000	.000
◇	.108				2.000	
◇	.162					

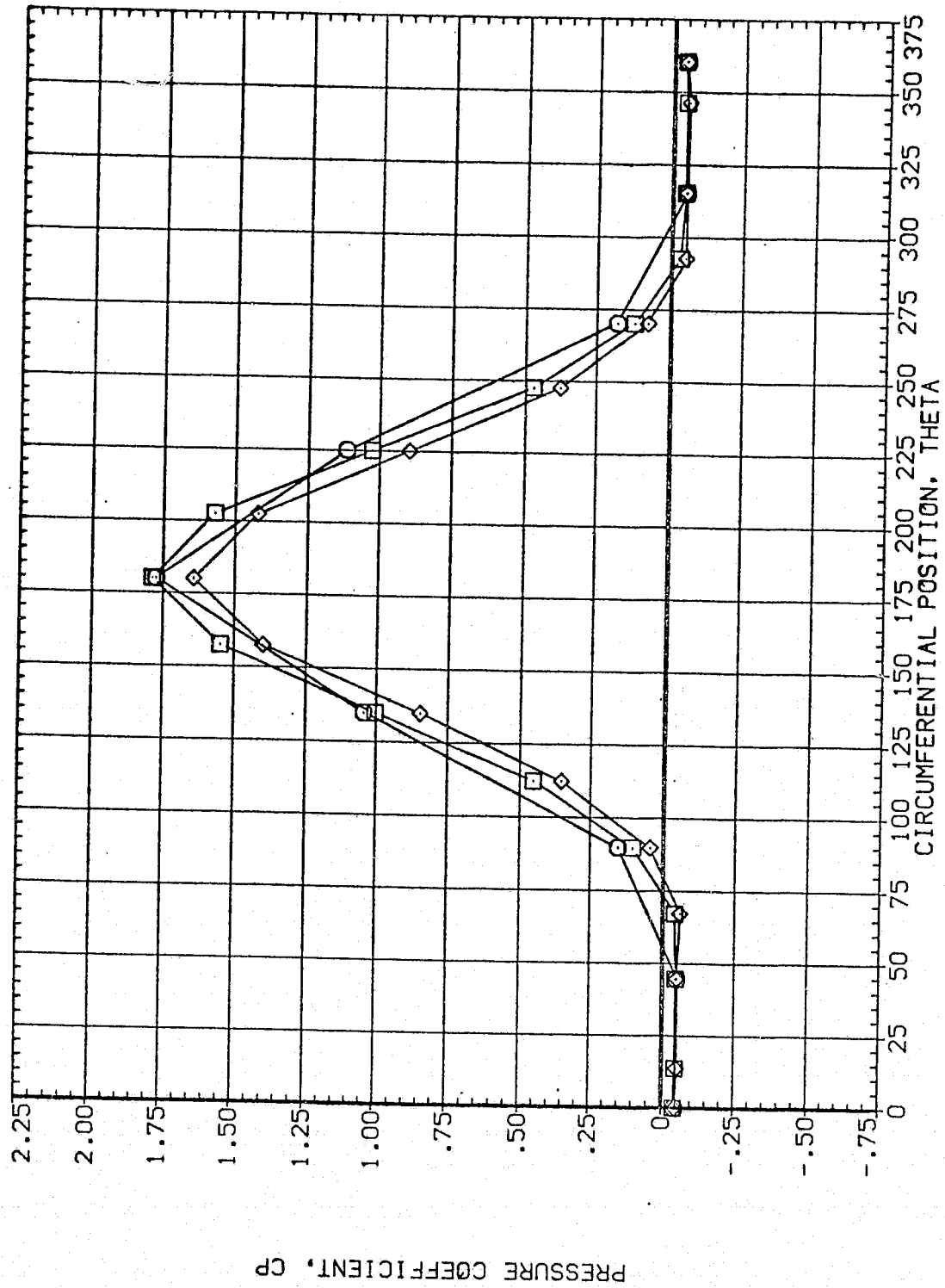


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.216	63.130	3.480	HOUNT	.000	60.000
◇	.322				2.000	.000
◇	.518					

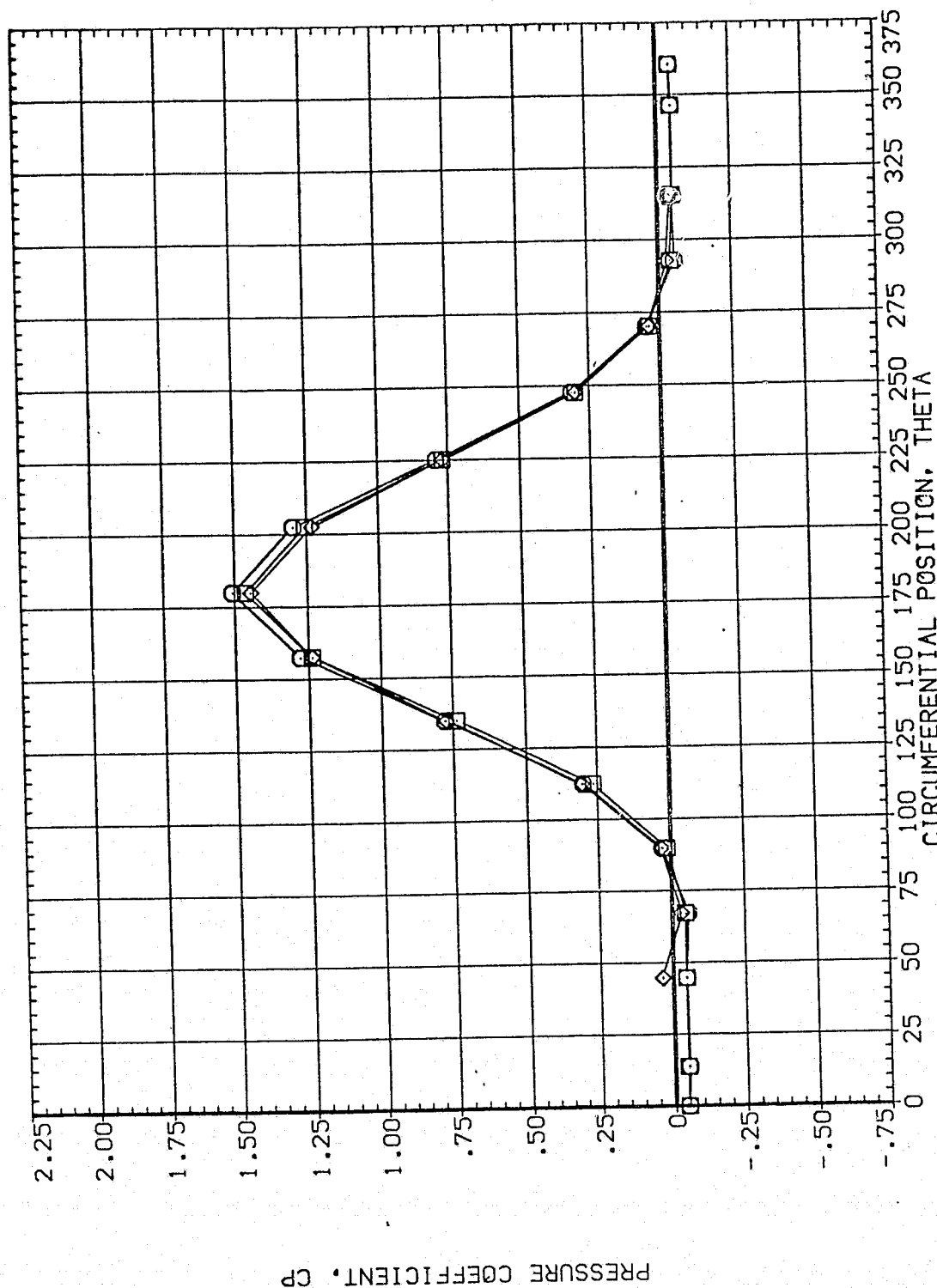


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	63.130	3.480	.000	.000	60.000
□	.735			2.000		.000
◇	.860					

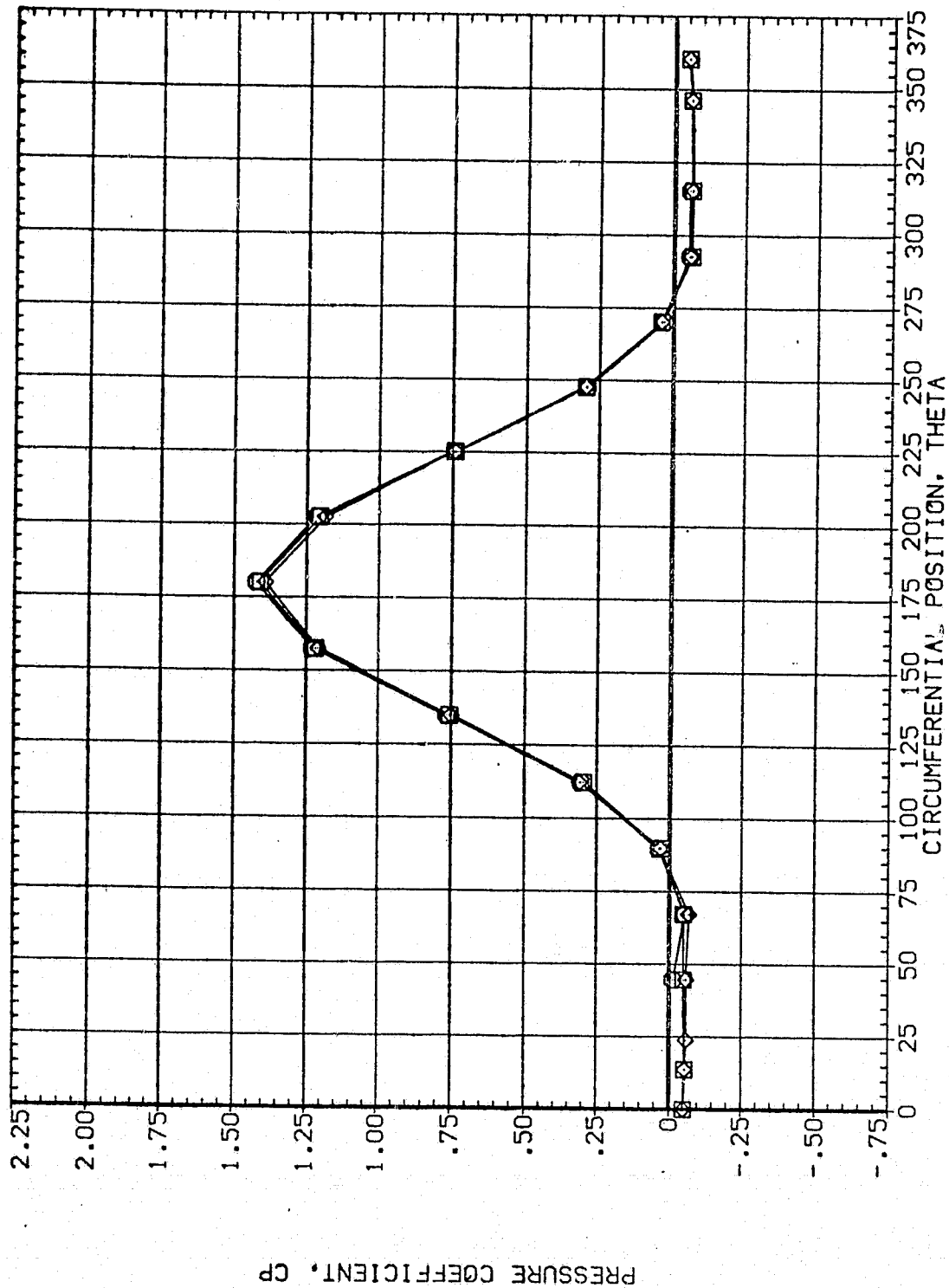


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.892	63.130	3.480	OUNT	.000	.000
◇	.923				2.000	
◇	.954					

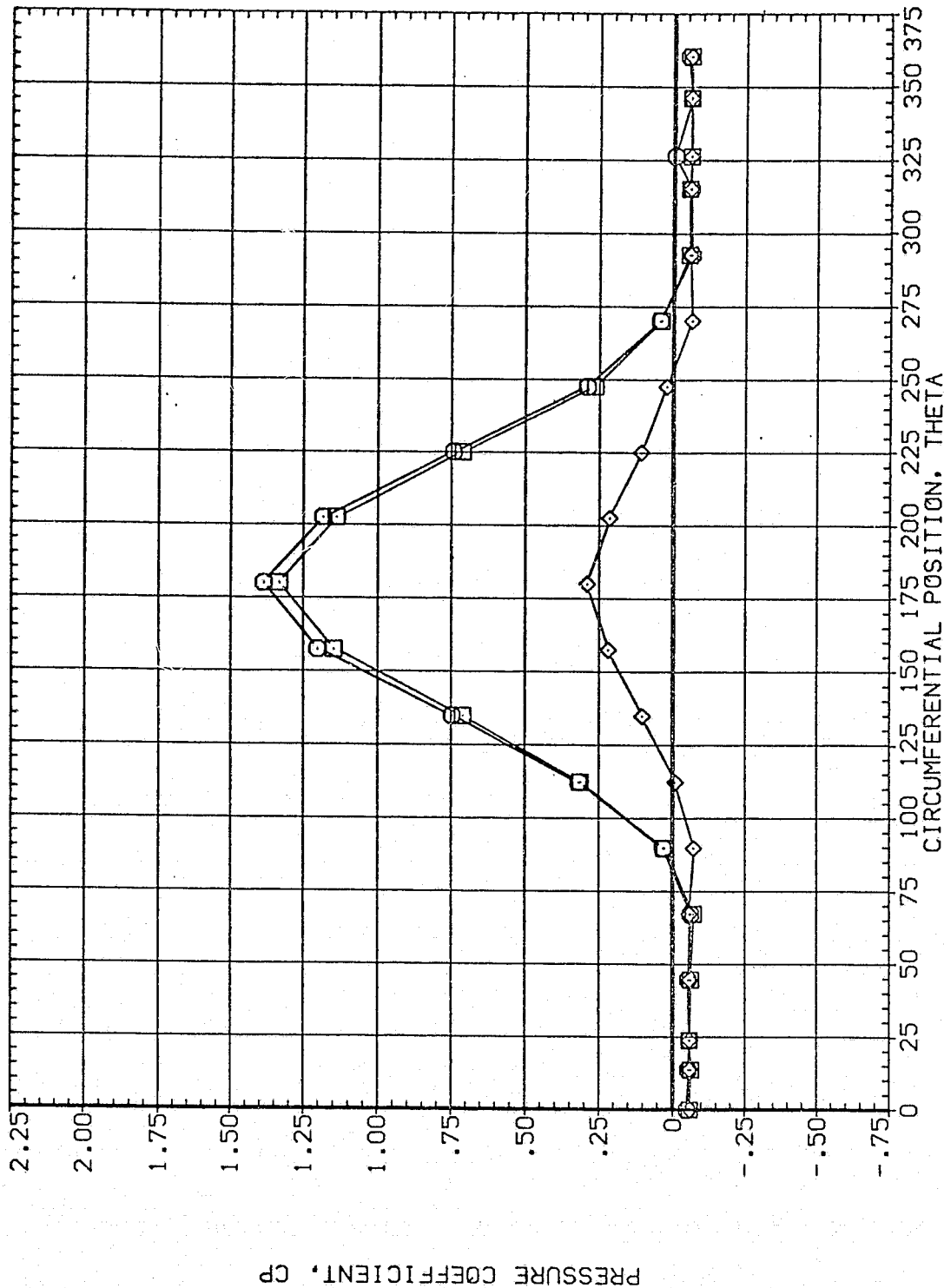


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	.000	
					OFFSET	PHI
				2.000	.000	60.000
				MOUNT		.000

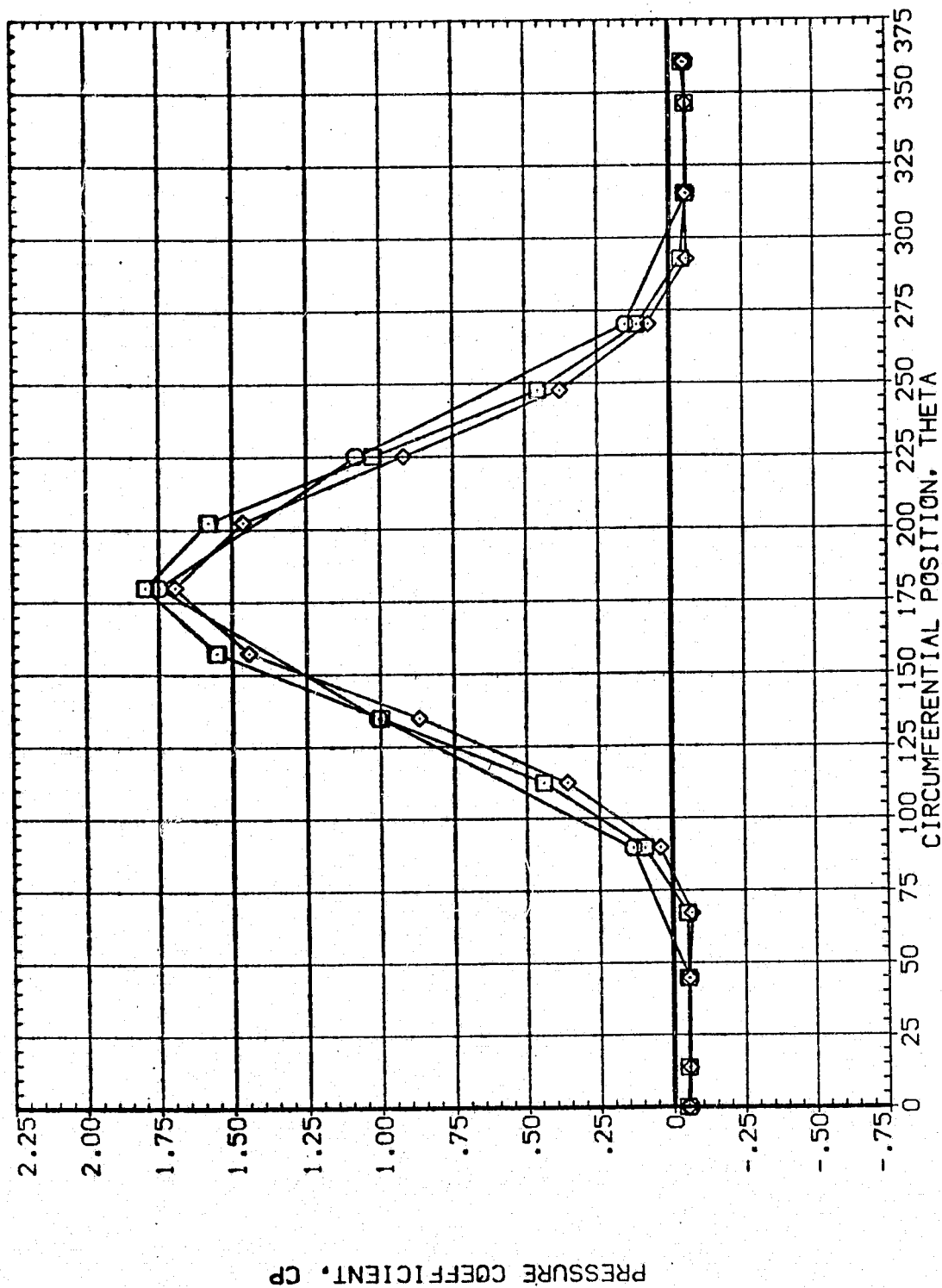


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

[P1A066]

000.
60.000

SYMBOL	X/LB	ALPHA	MACH
○	.216	66.130	3.480
□	.322		
◇	.518		

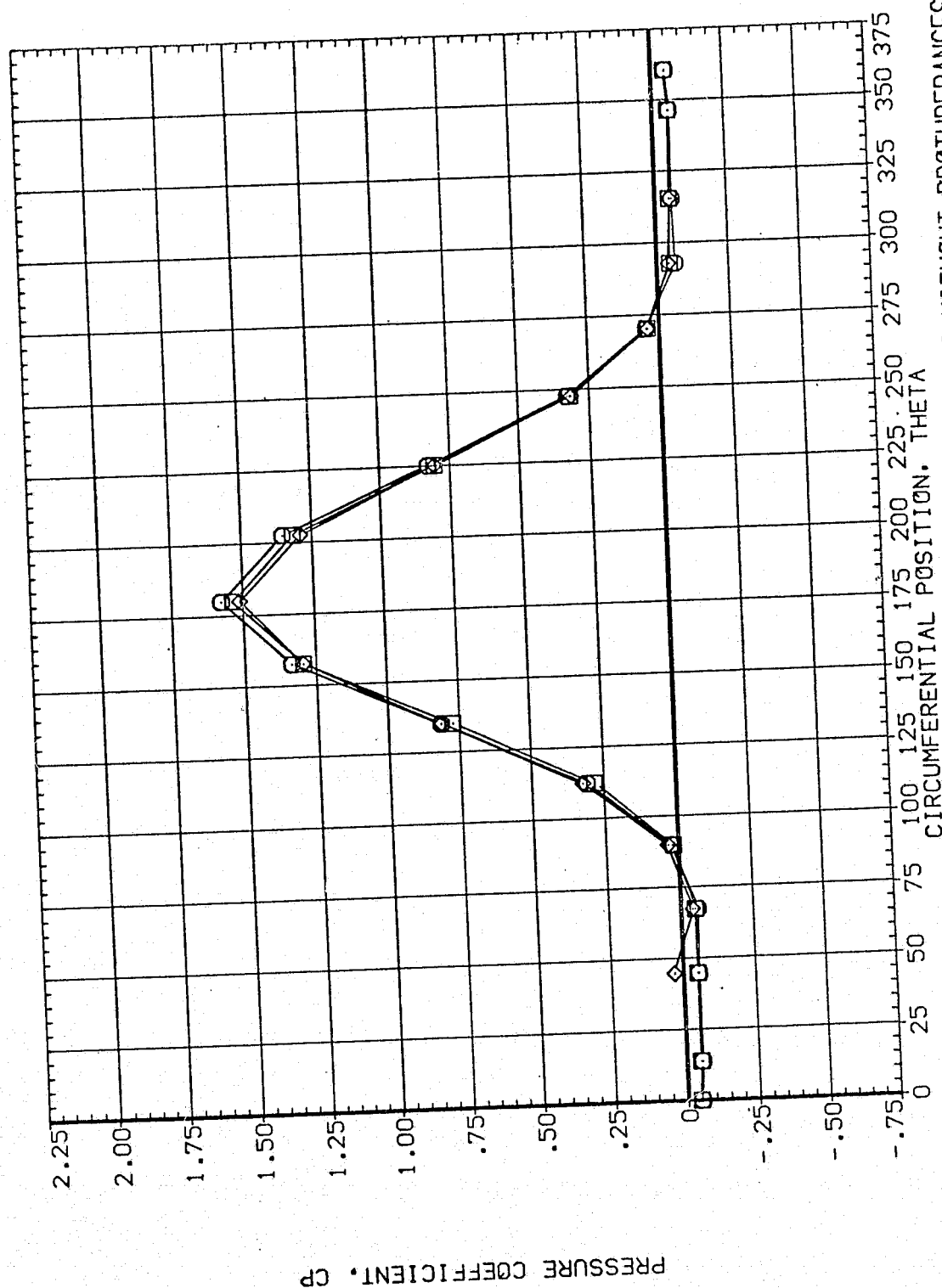


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A066)

SYMBOL
□
◇

X/LB
.610
.735
.860

ALPHA
66.130

MACH
3.480

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
OFFSET
PHI
60.000
.000

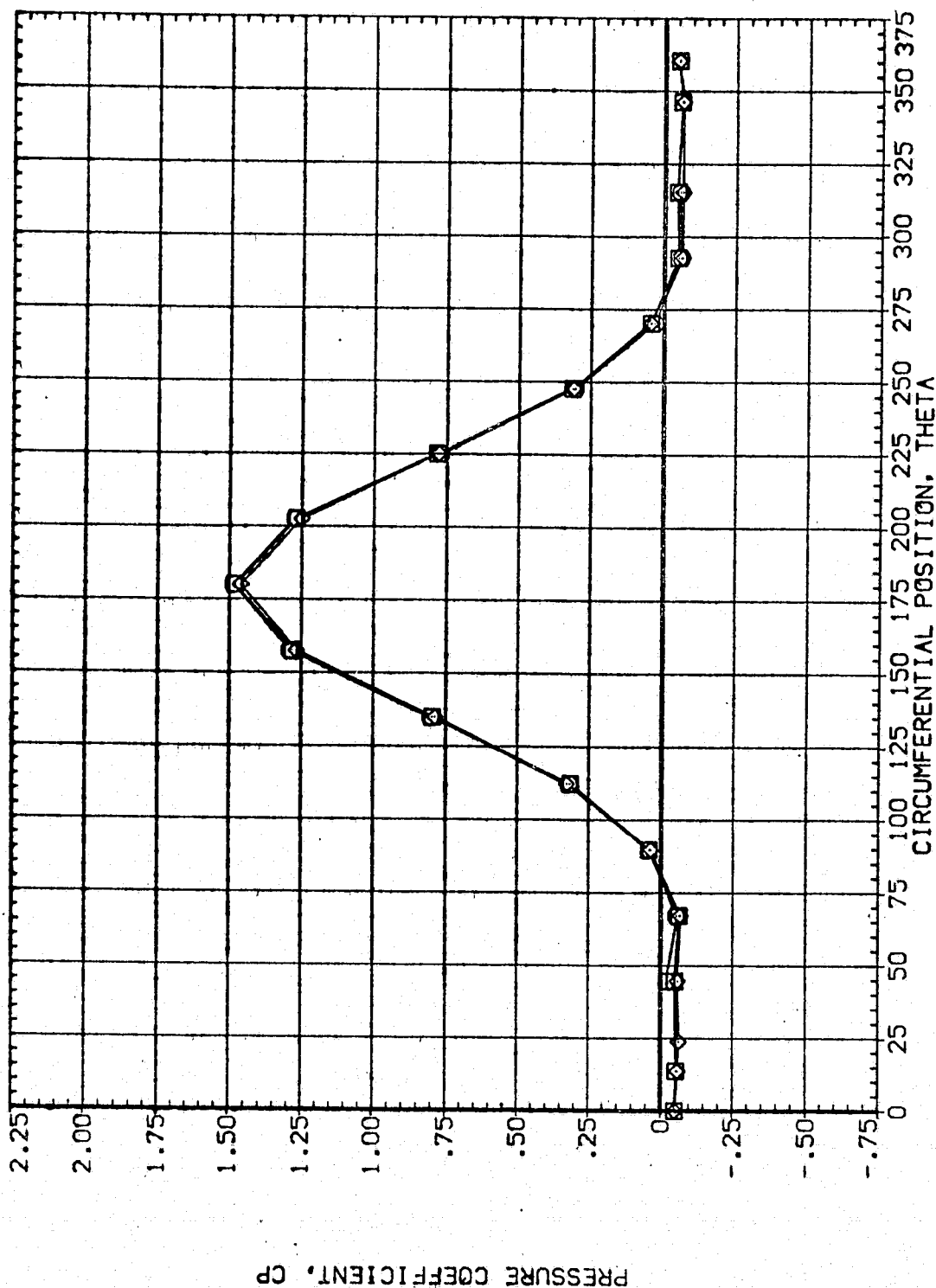


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
○	.892	66.130	3.480	MMOUNT	2.000	PHI
□	.923					.000
◇	.954					

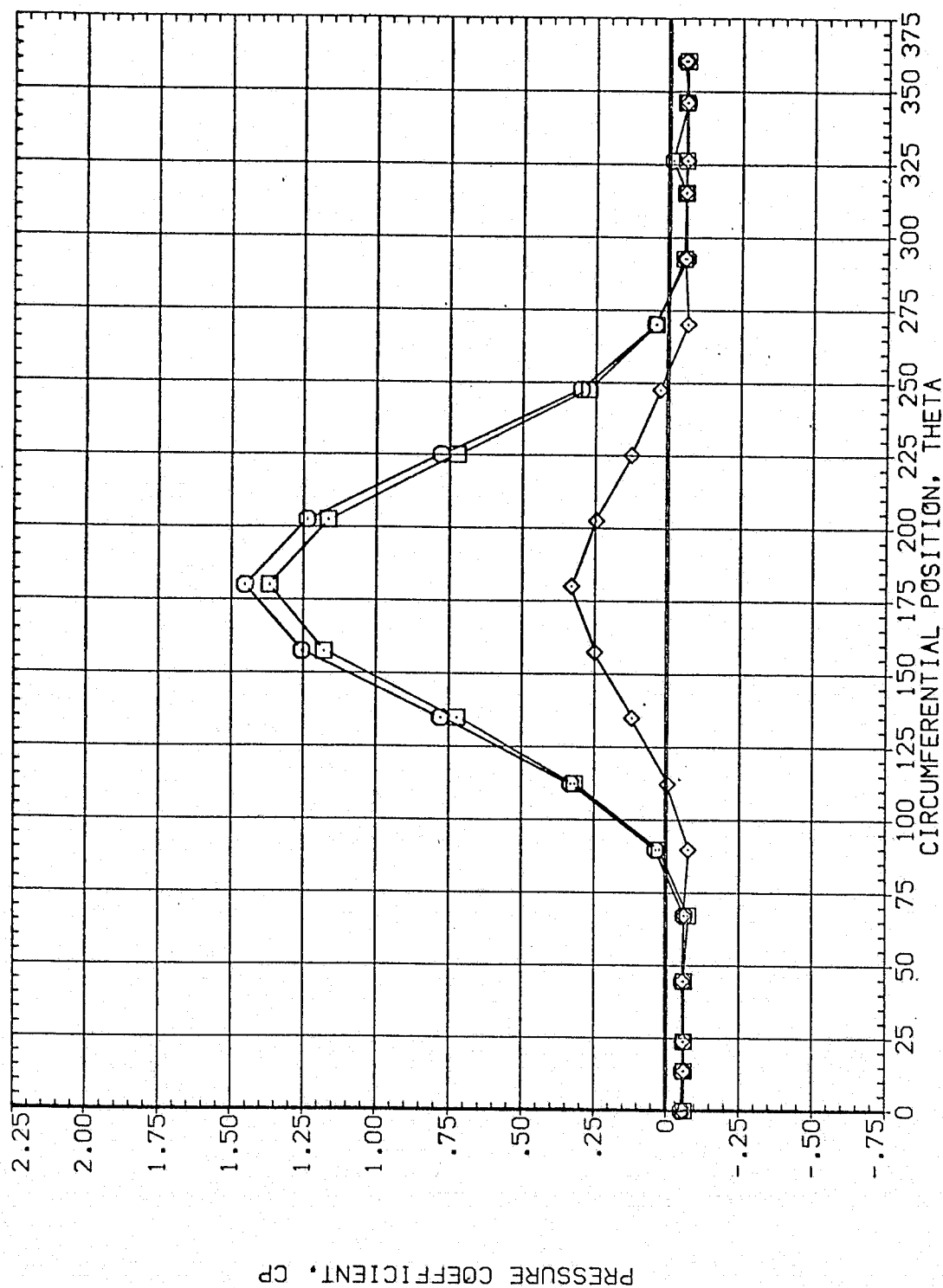


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	.000	60.000
○	.055	69.130	3.480	PHI	2.000	.000
□	.108					
◇	.162					

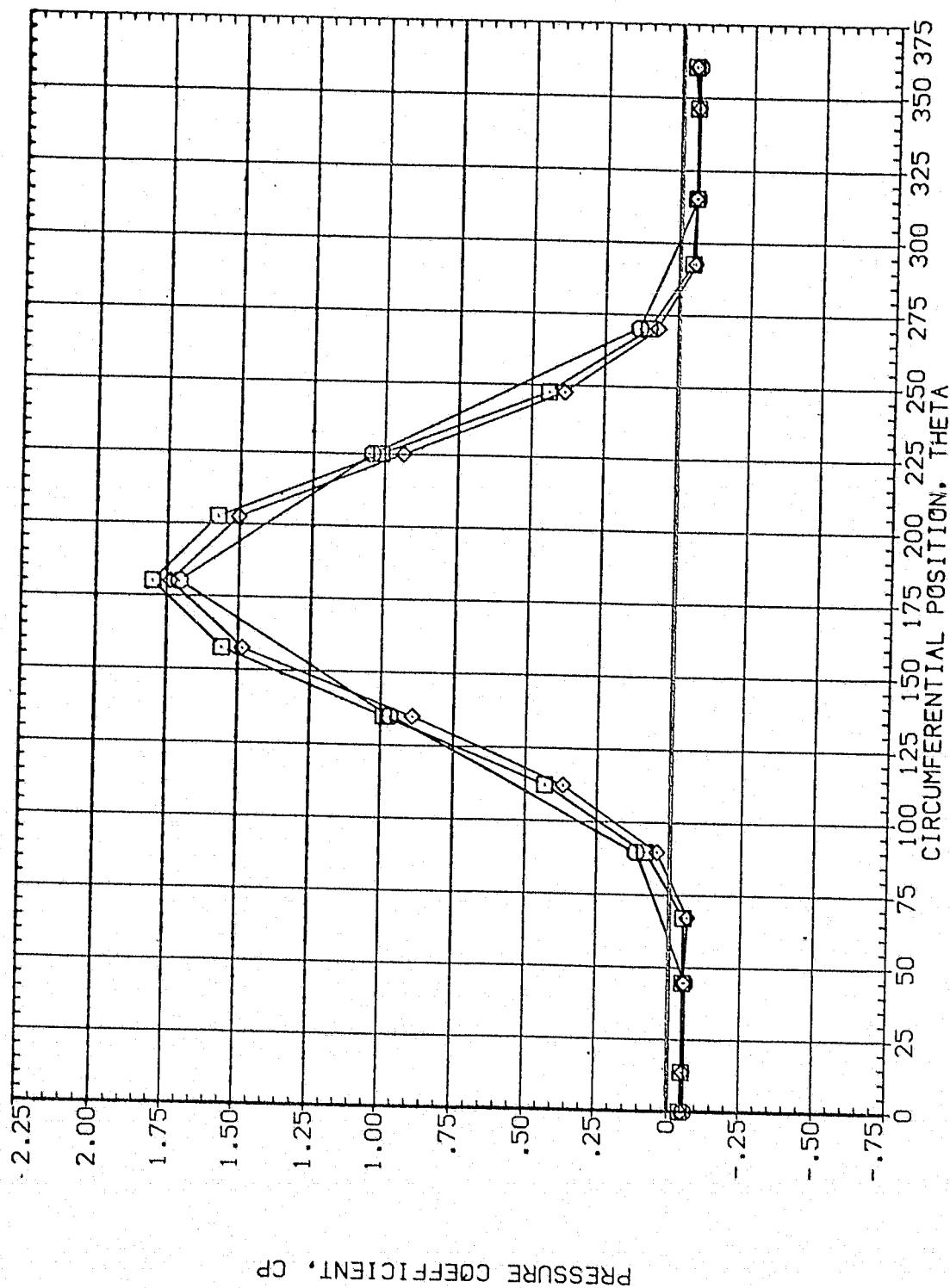


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL
□
◇

X/LB .216
.322
.518
ALPHA 69.130
MACH 3.480

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
OFFSET PHI 60.000
.002

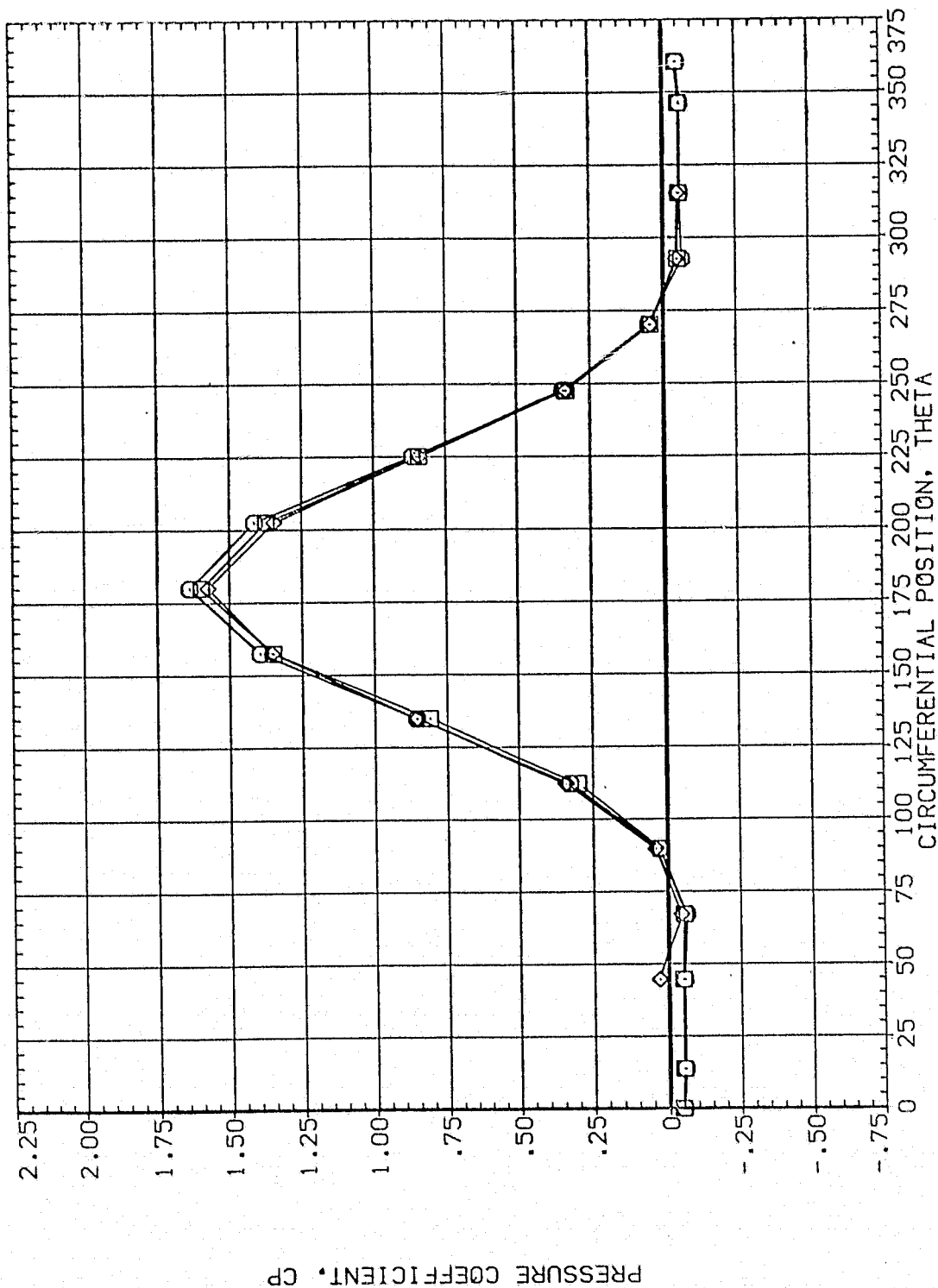


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.610	69.130	3.480	MOUNT	.000	60.000
◇	.735				2.000	.000
◇	.860					

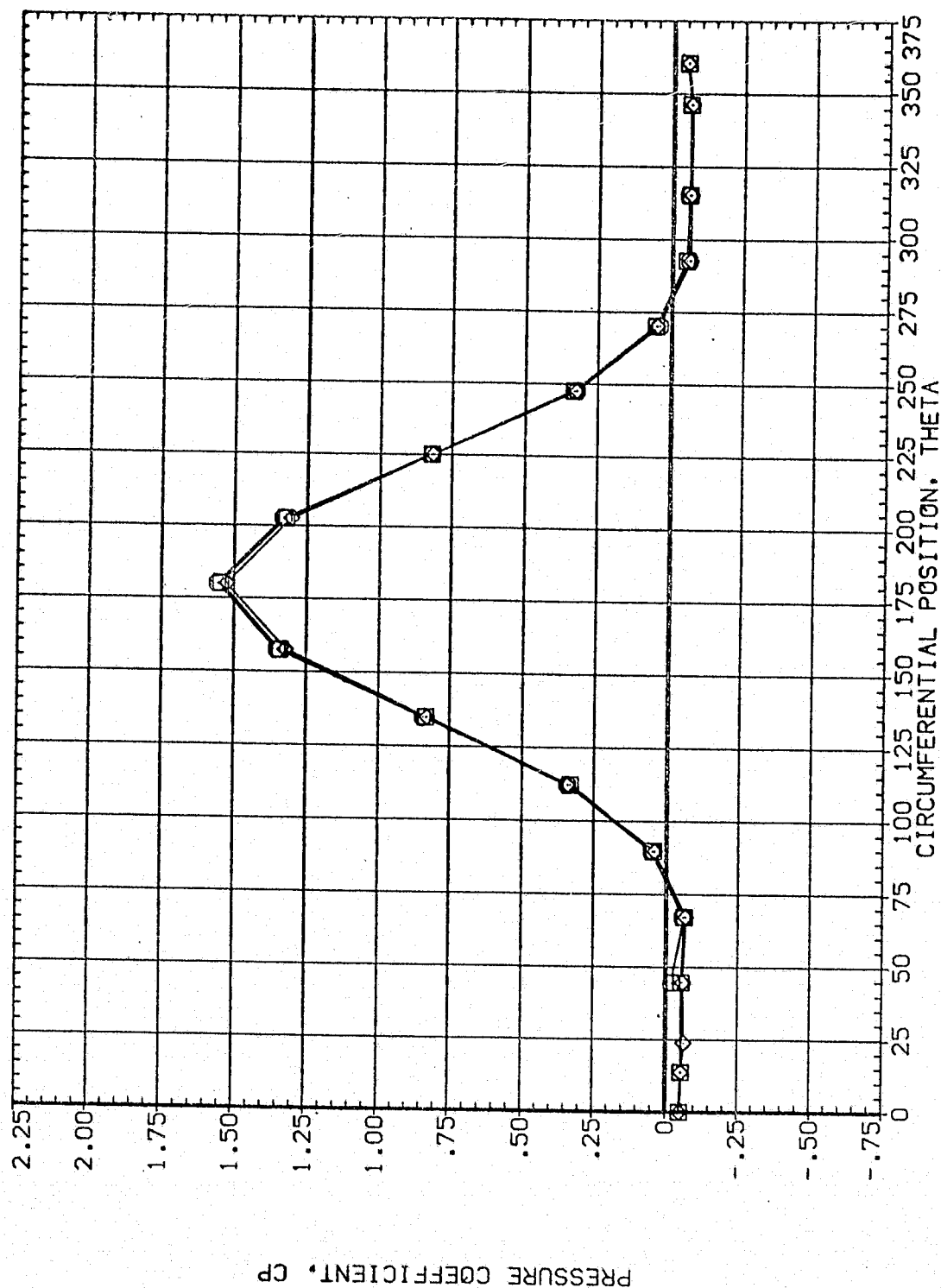


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.892	69.130	3.480	MOUNT	.000 OFFSET
□	.923				2.000 PHI
◇	.954				60.000 .000

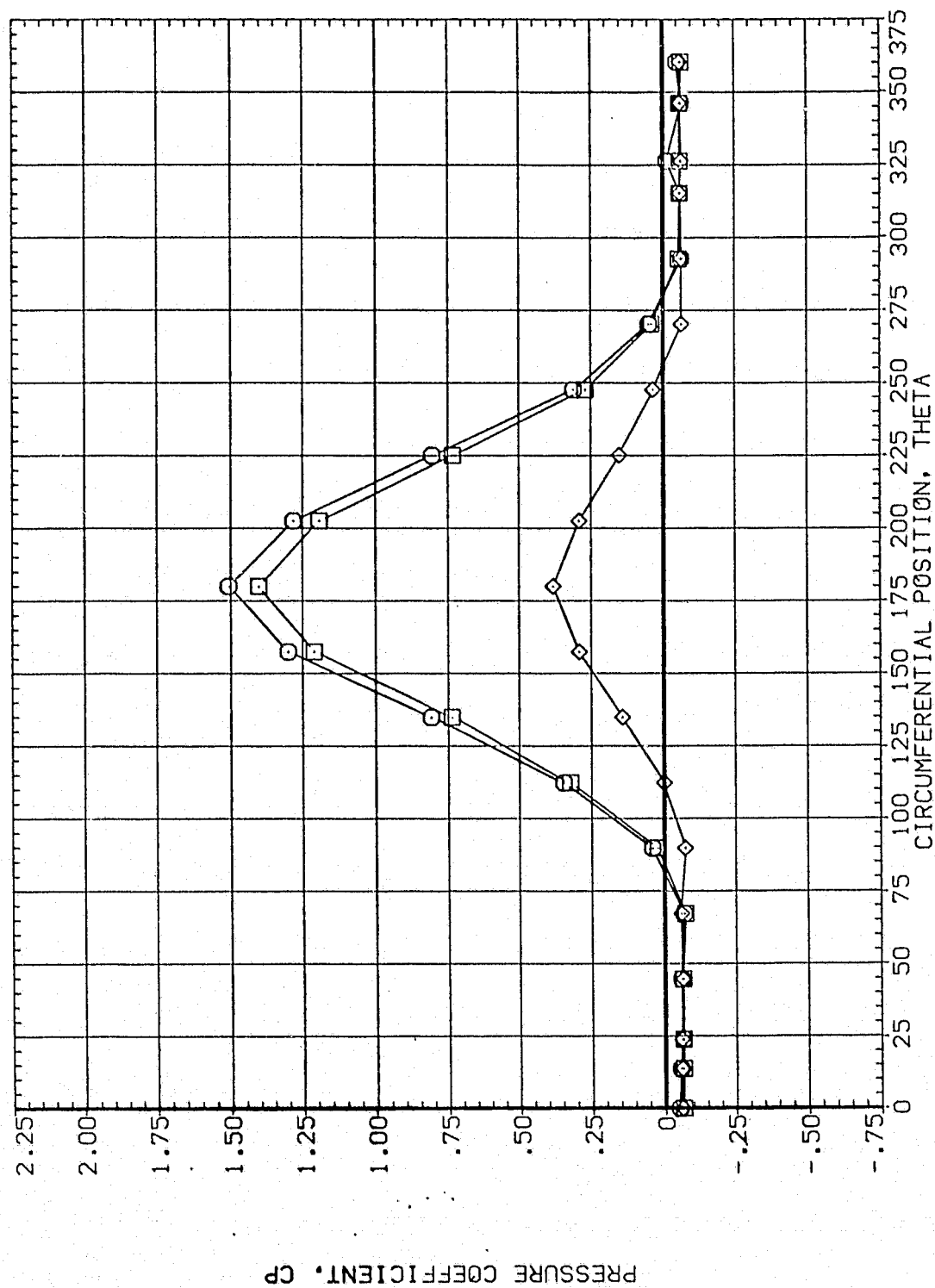


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2548

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL X/LB ALPHA MACH
 □ .055 69.980 3.480
 ○ .108
 ◇ .162

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

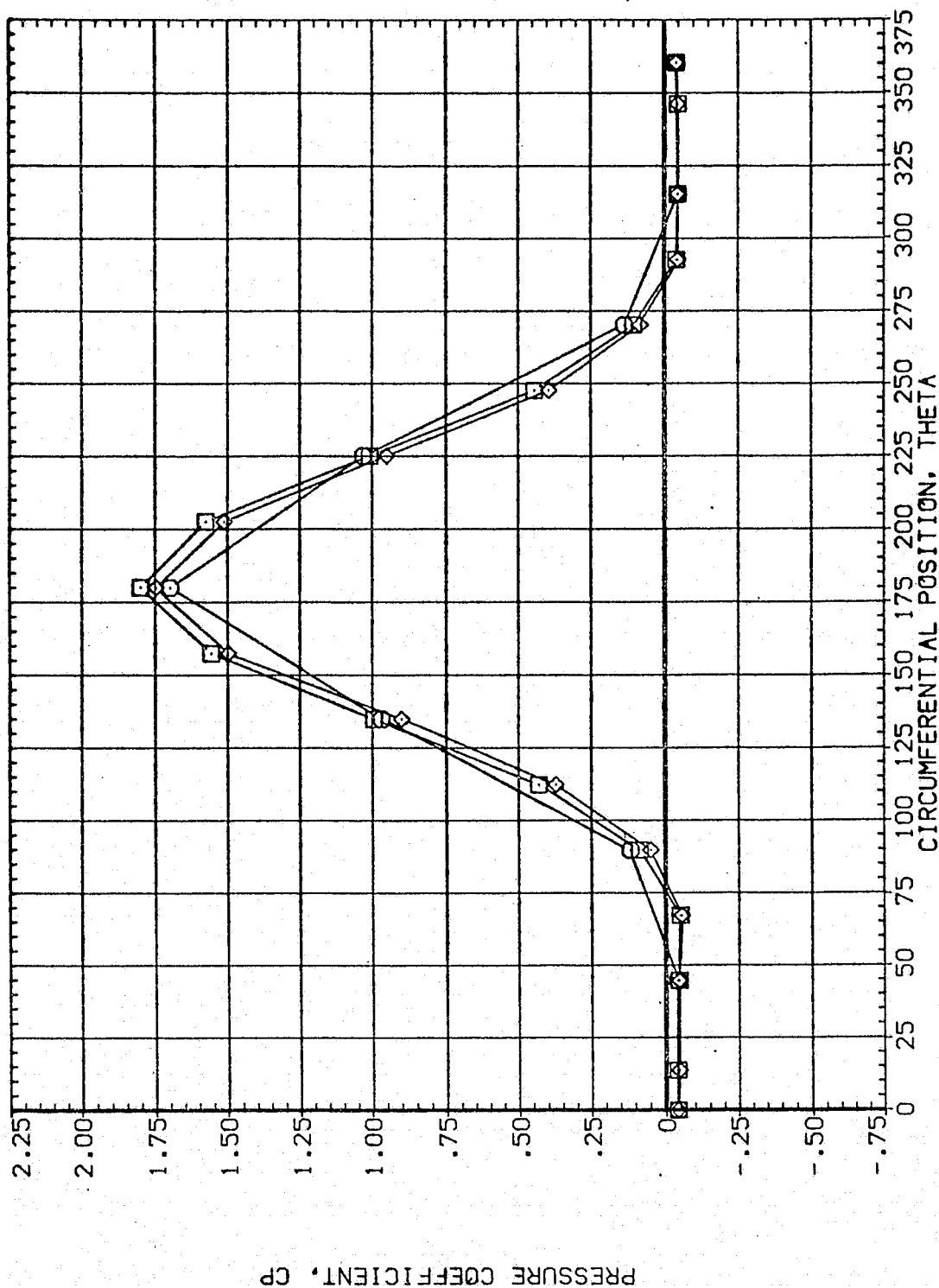


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.216	69.980	3.480	MOUNT	.000	80.000
□	.322				2.000	
◇	.518					.000

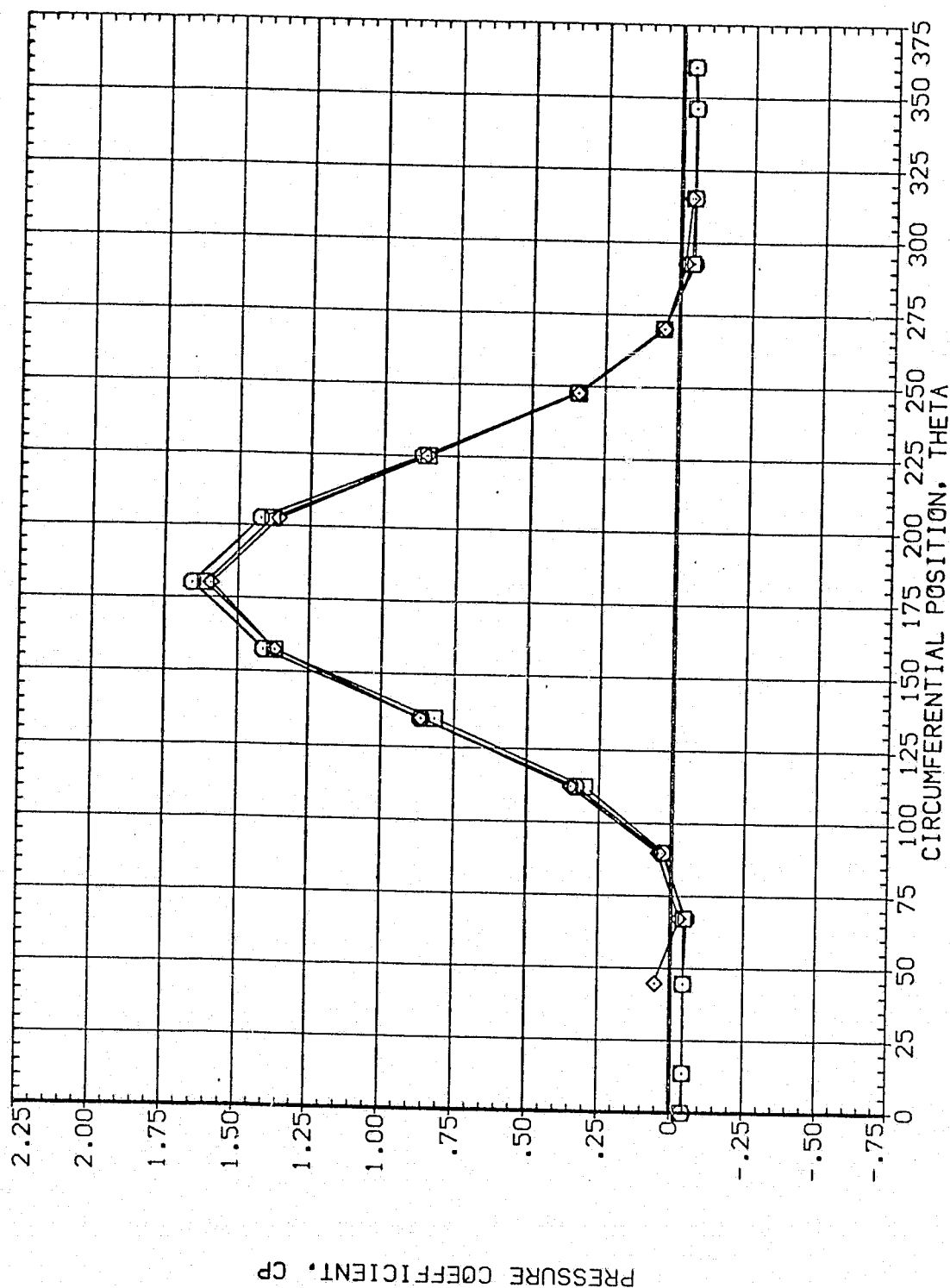


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.610	69.980	3.480	MOUNT	.000	.000
◇	.735				2.000	
◇	.860					

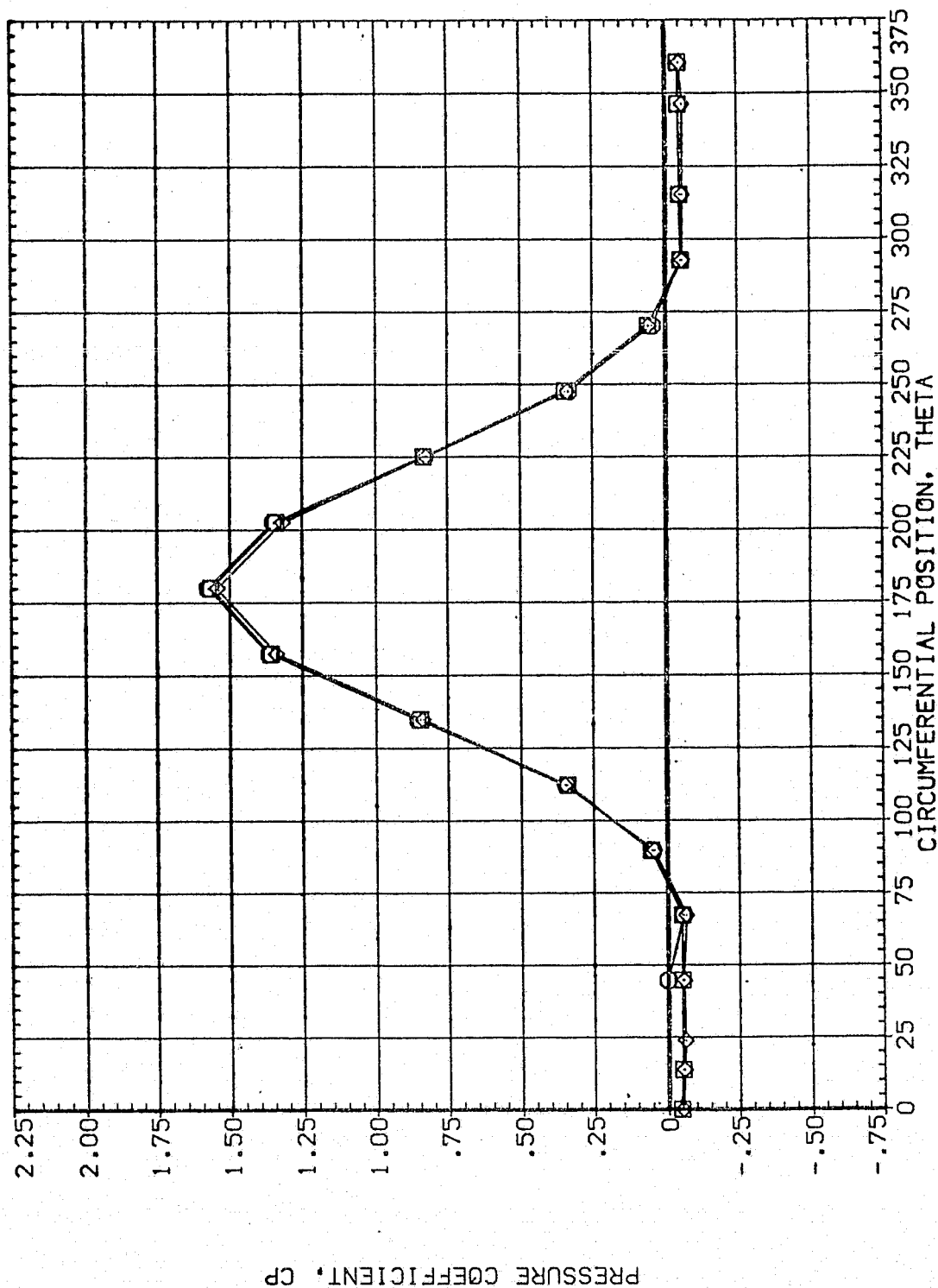


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2551

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ORIGINAL PAGE IS POOR

SYMBOL
 ○ □ ◇

X/LB .892
 .923
 .954
 ALPHA 69.980
 MACH 3.480

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 80.000
 .000

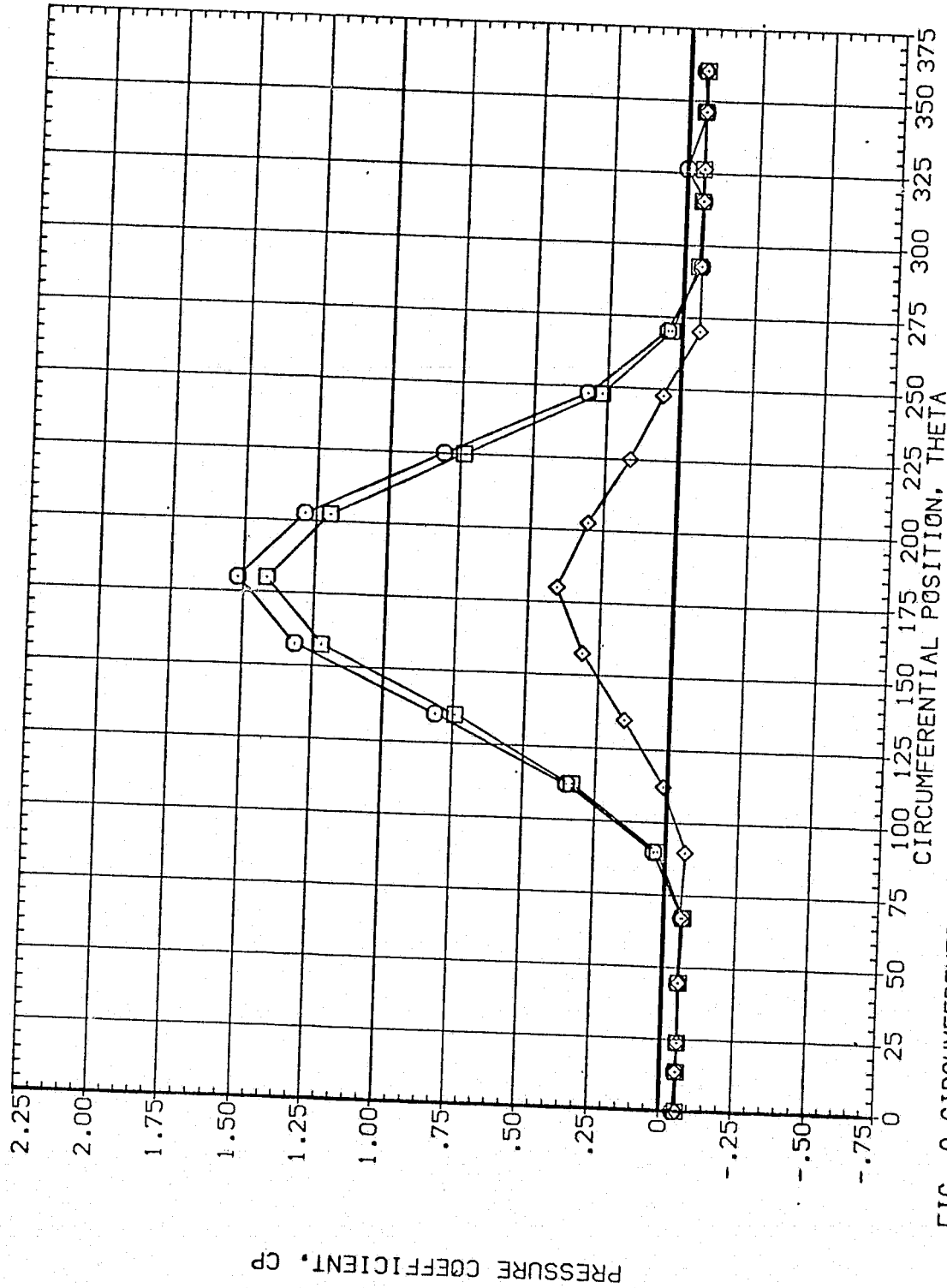


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2552

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A069)

SYMBOL
 ○
 □
 ◇

X/LB .055
 .108
 .162

ALPHA 71.880

HACH 3.480

BETA MOUNT
 .000
 2.000
 .000

PARAMETRIC VALUES
 .000
 .000
 .000

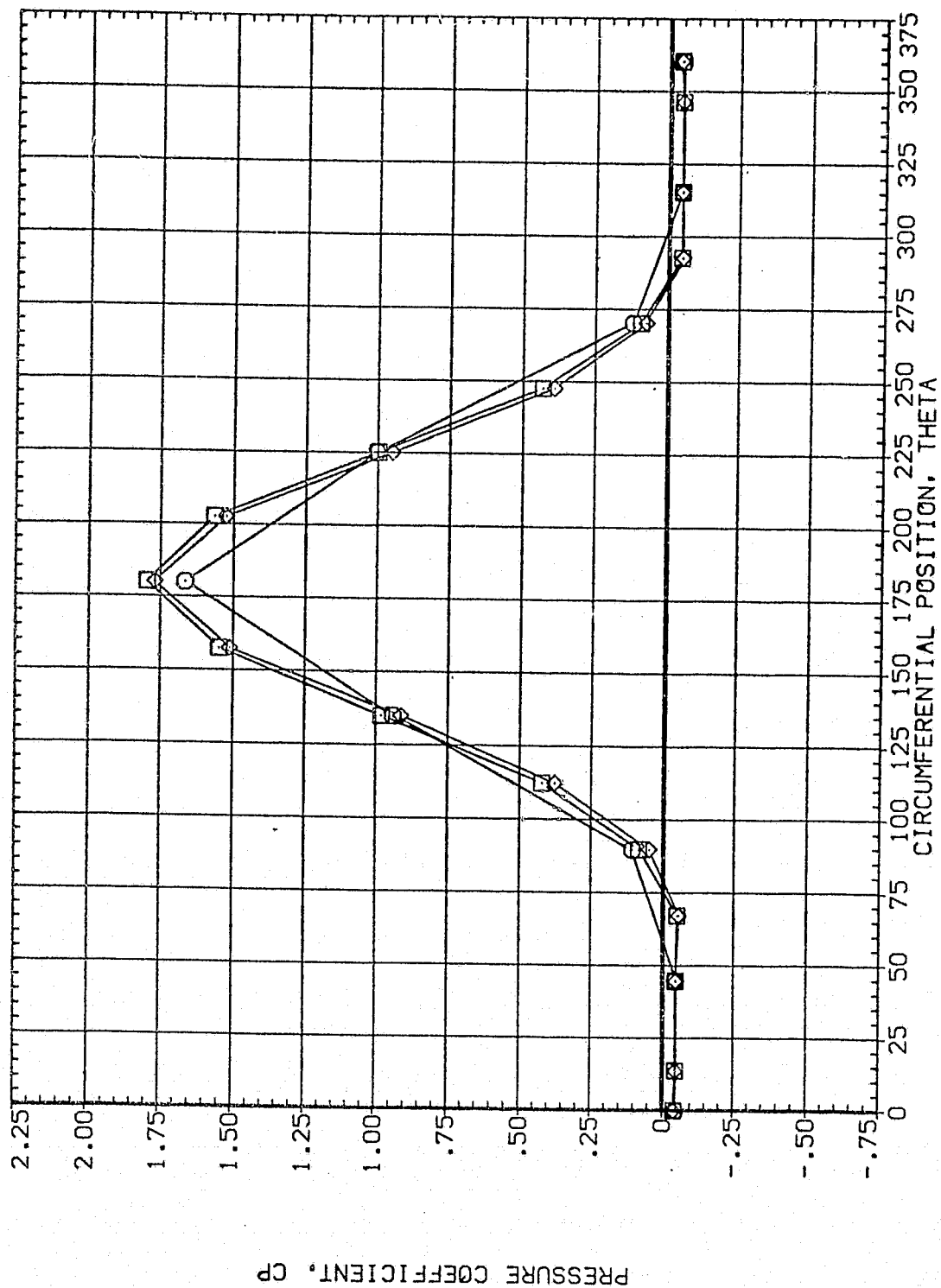


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A069)

SYMBOL

X/LB

ALPHA

MACH

.216
.322
.518

BETA
MOUNT

.000
2.000

PARAHETRIC VALUES
OFFSET
PHI

80.000
.000

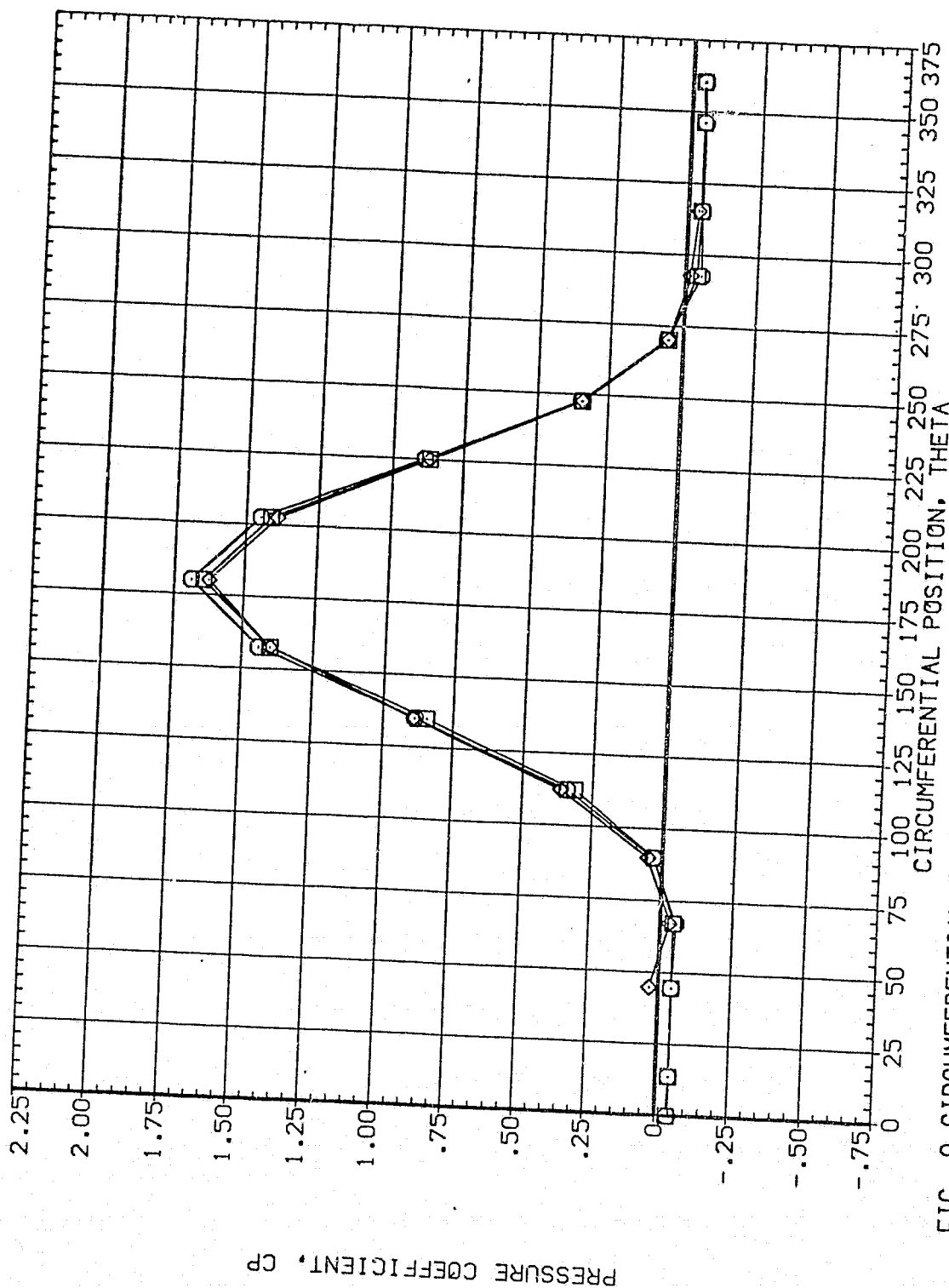


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A069)

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 PHI 80.000
 .000

ALPHA 71.880
 MACH 3.480

SYMBOL X/LB
 .610
 .735
 .860

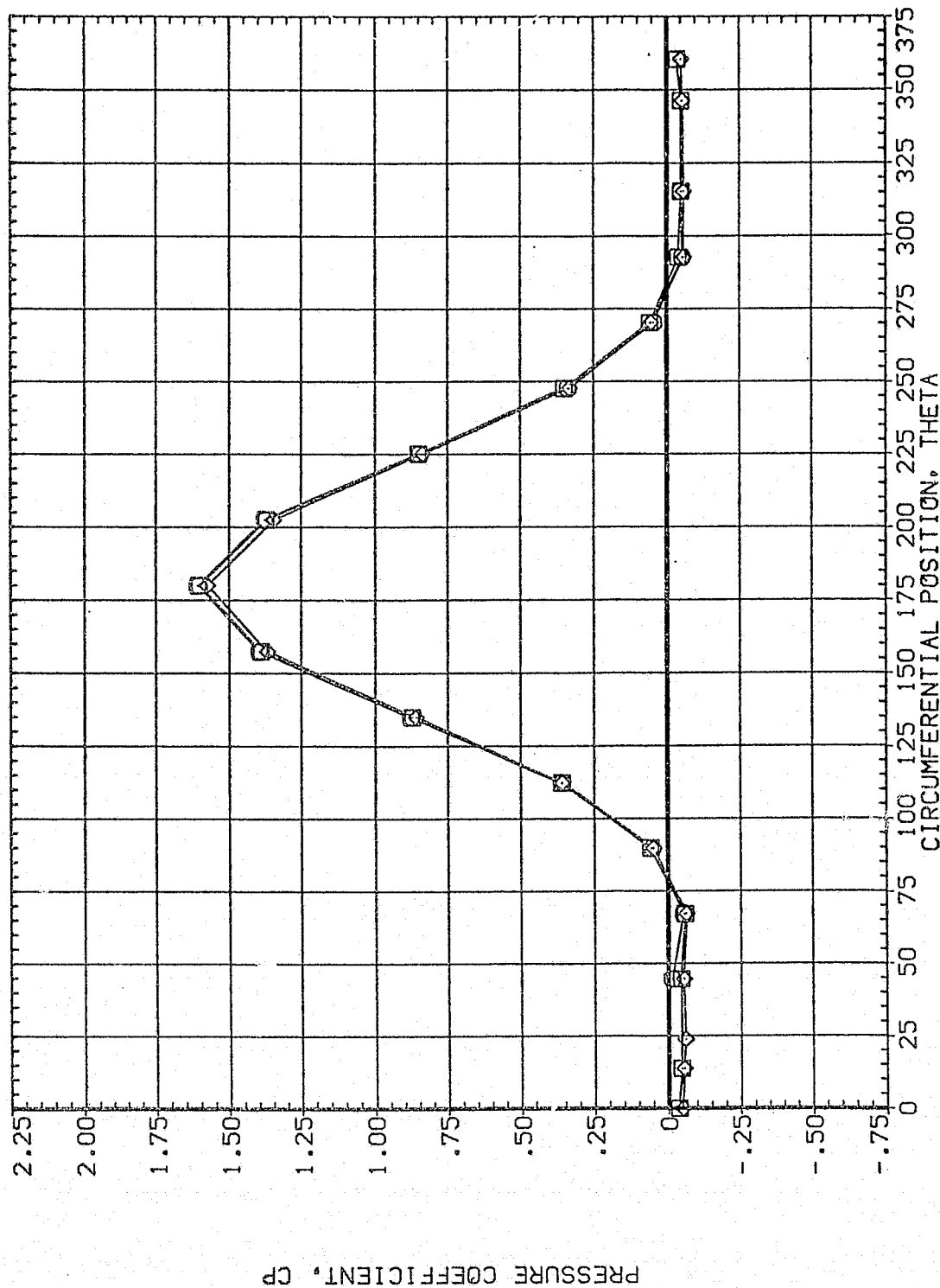


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T2 (P1A069)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.892	71.880	3.480	2.000	.000	.000
□	.923			2.000	.000	.000
◇	.954					

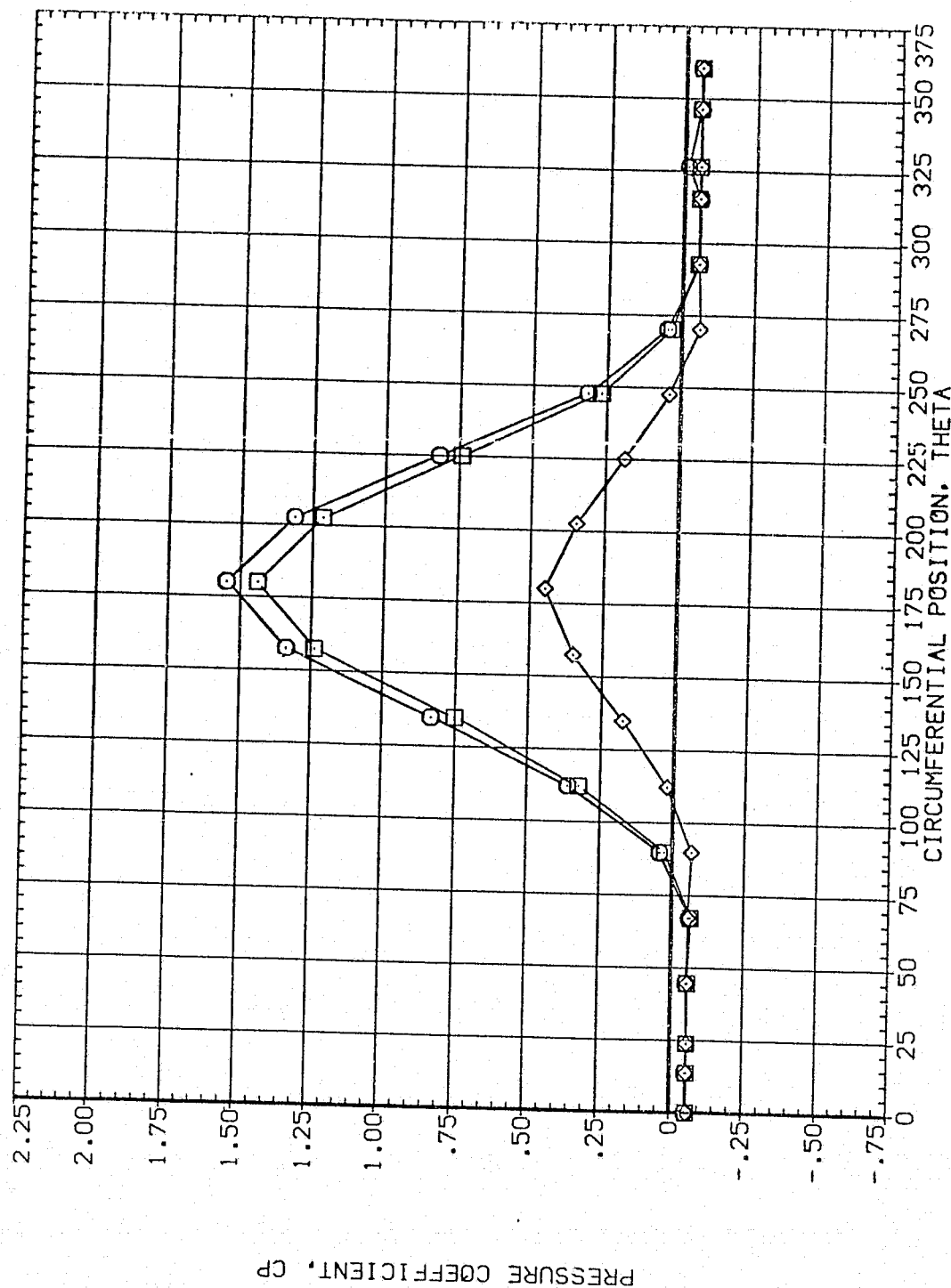


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A070)

SYMBOL
 □
 ○
 ◇

X/LB .055
 .108
 .162

ALPHA 74.860
 MACH 3.480

BETA
 MOUNT

PARAMETRIC VALUES
 .000 .000 80.000
 2.000 PHI .000

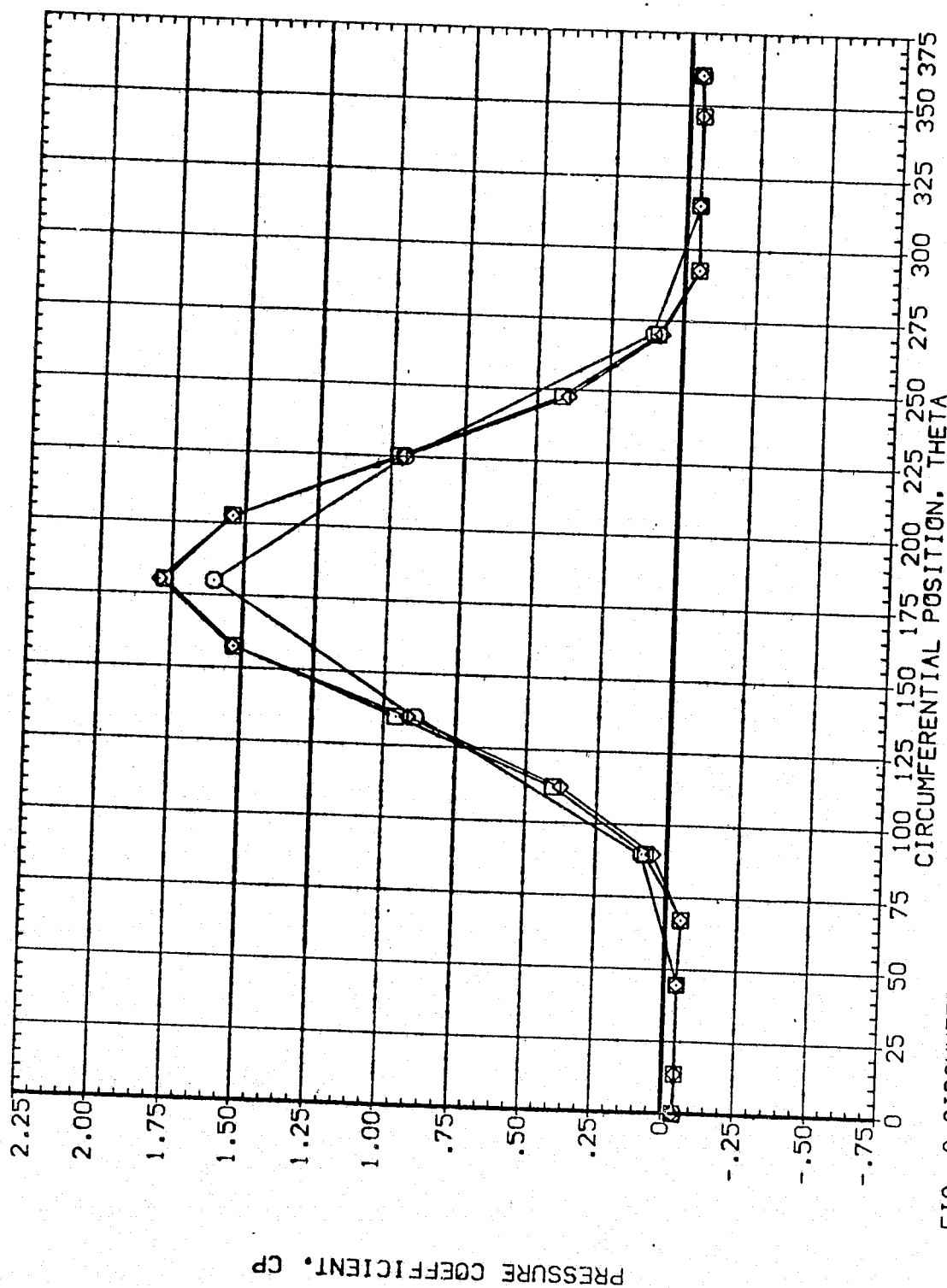


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL X/LB ALPHA MACH
 O .216 74.860 3.480
 □ .322
 ◇ .518

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 80.000
 .000

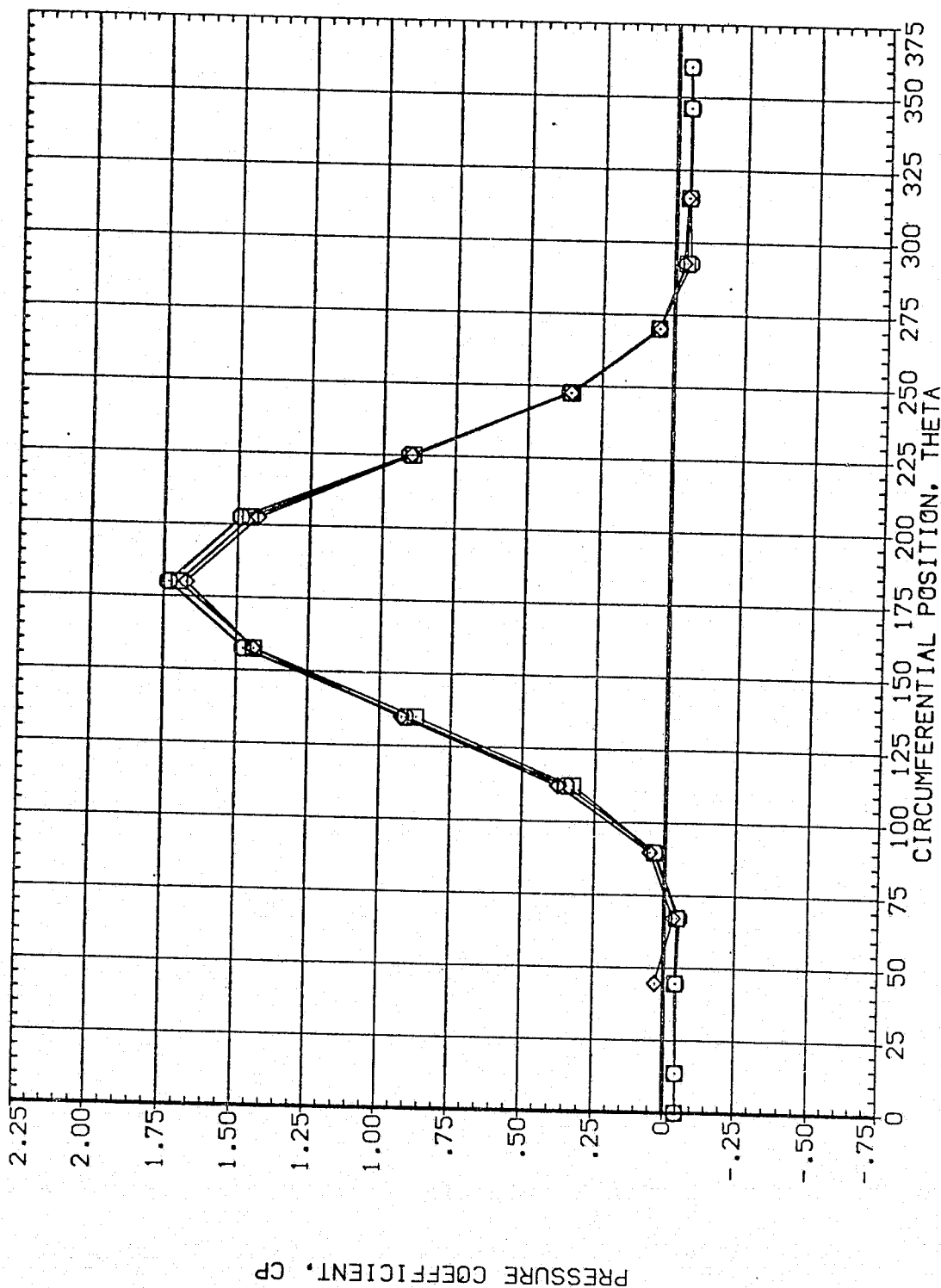


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T2

(P1A070)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.510	74.860	3.480	MOUNT	.000	80.000
□	.735				2.000	
◇	.860					.000

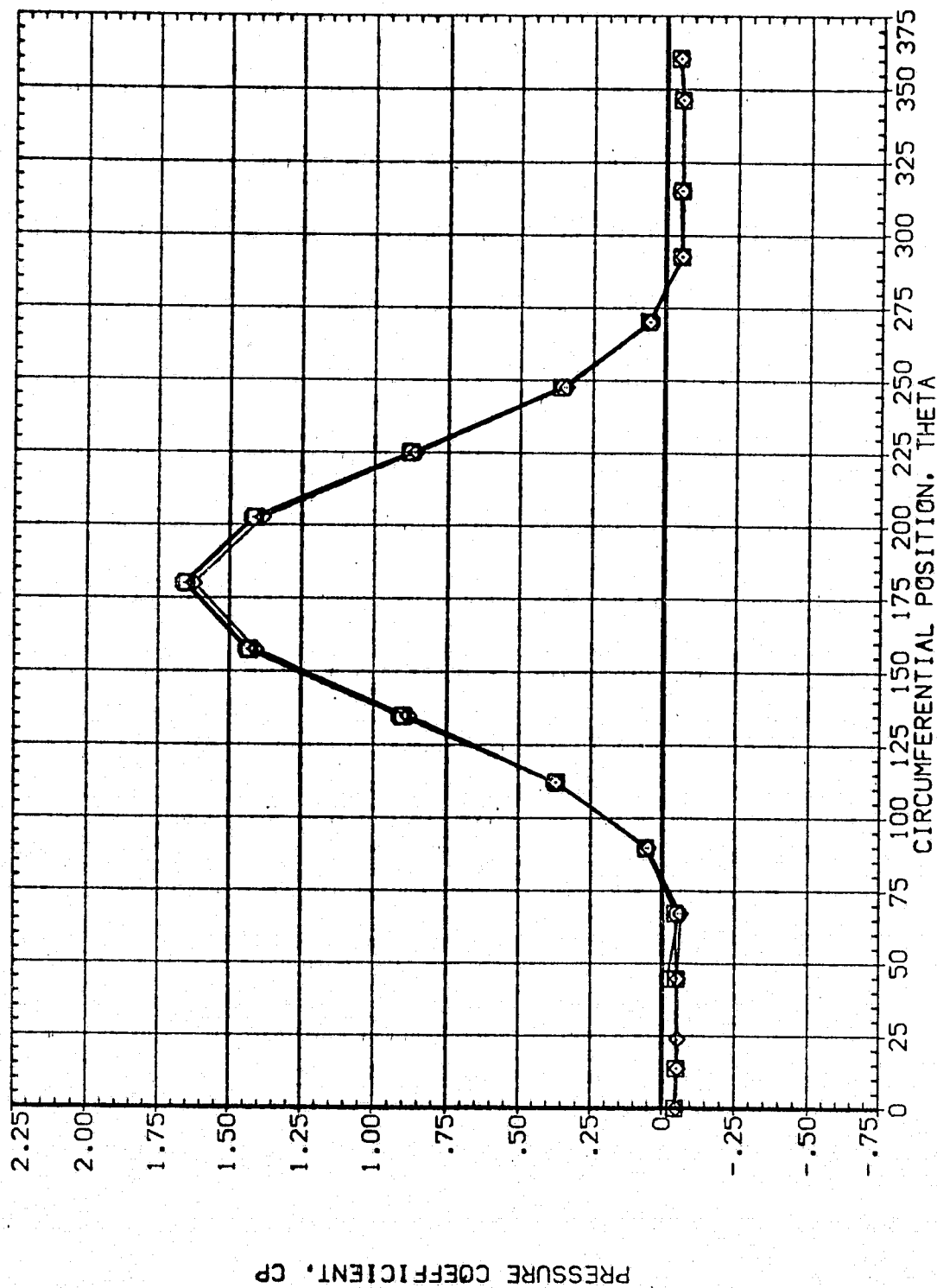


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL

X/LB

ALPHA

HACH

3.480

74.860

.892

.923

.954

PARAMETRIC VALUES

.000

2.000

PHI

80.000

.000

BETA

MOUNT

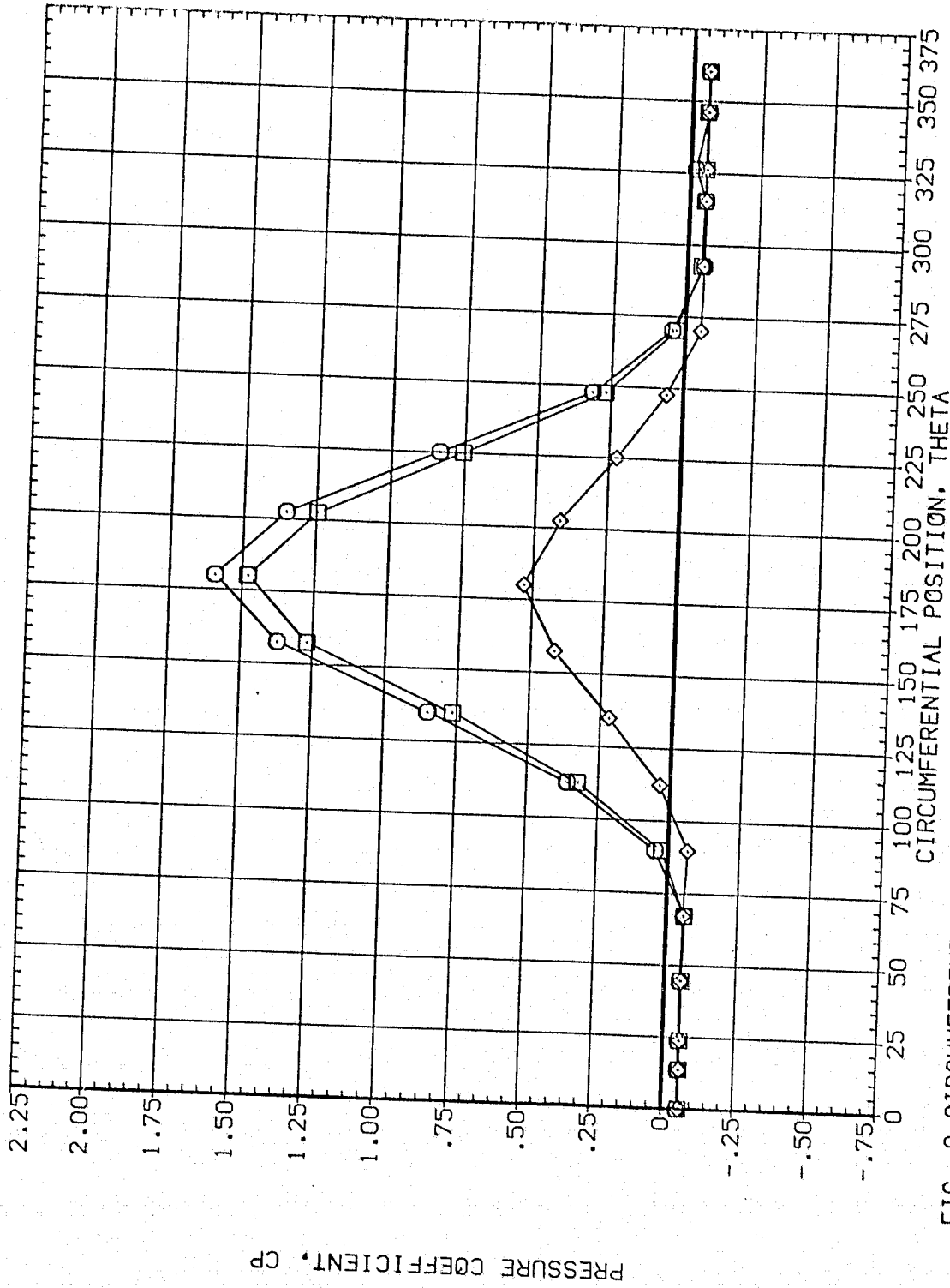


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.055	77.880	3.480	2.000	.000	80.000
◇	.162			2.000	.000	.000

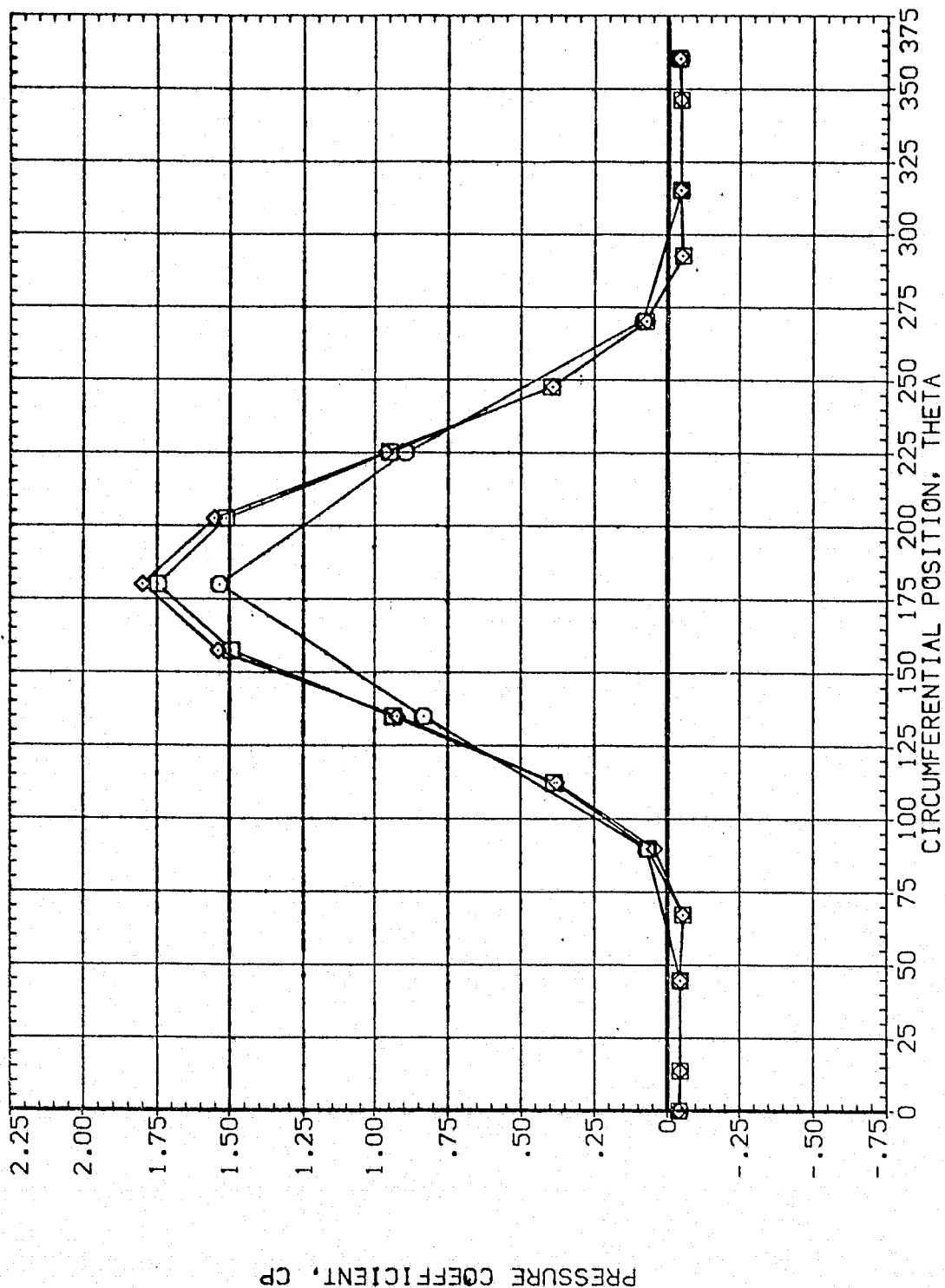


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.216	77.880	3.480	MOUNT	.000 OFFSET
□	.322				2.000 PHI
◇	.518				80.000

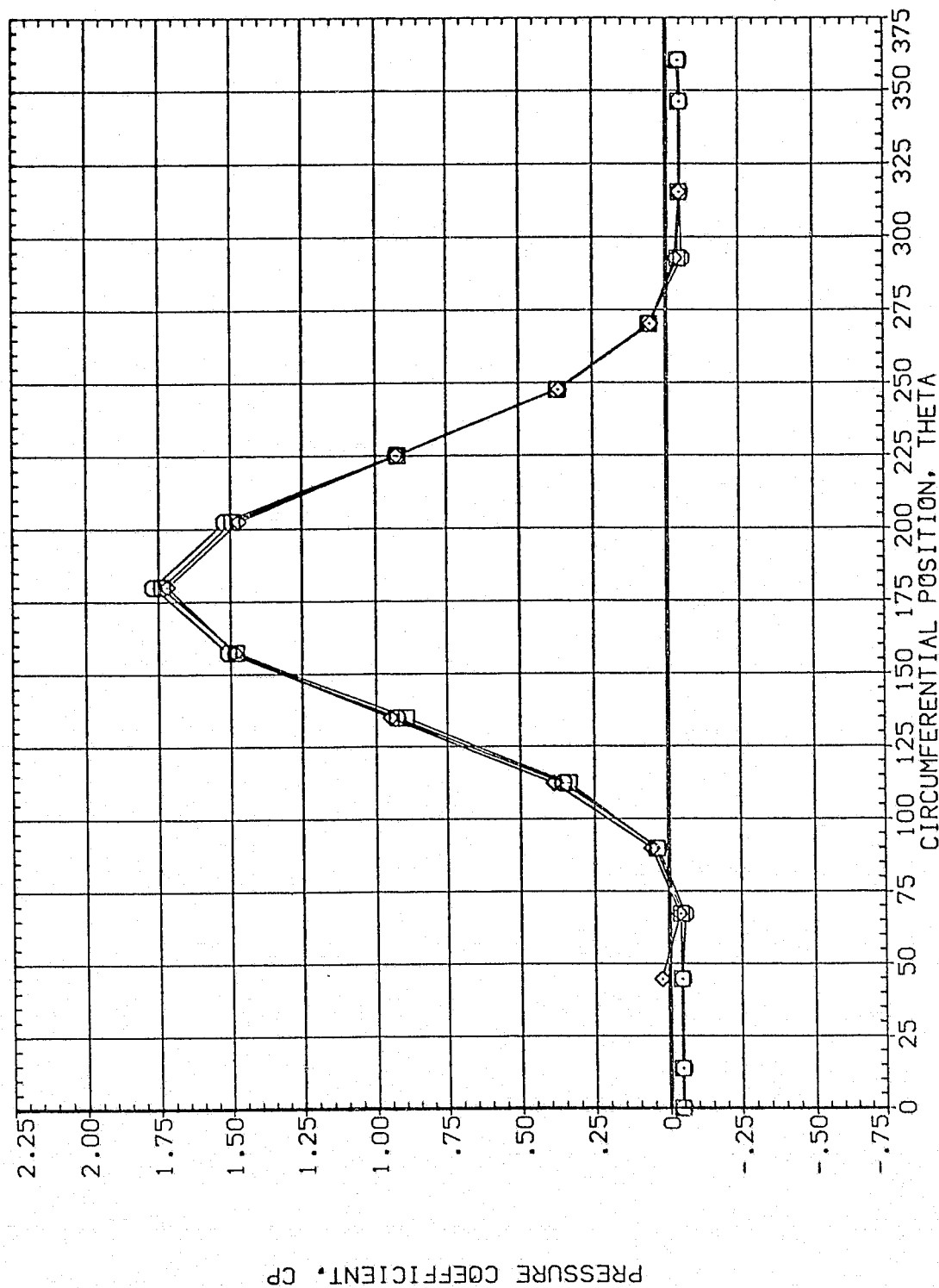


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA MOUNT	OFFSET PHI	80.000 .000
□	.610	77.880	3.480			
◇	.735					
◇	.860					

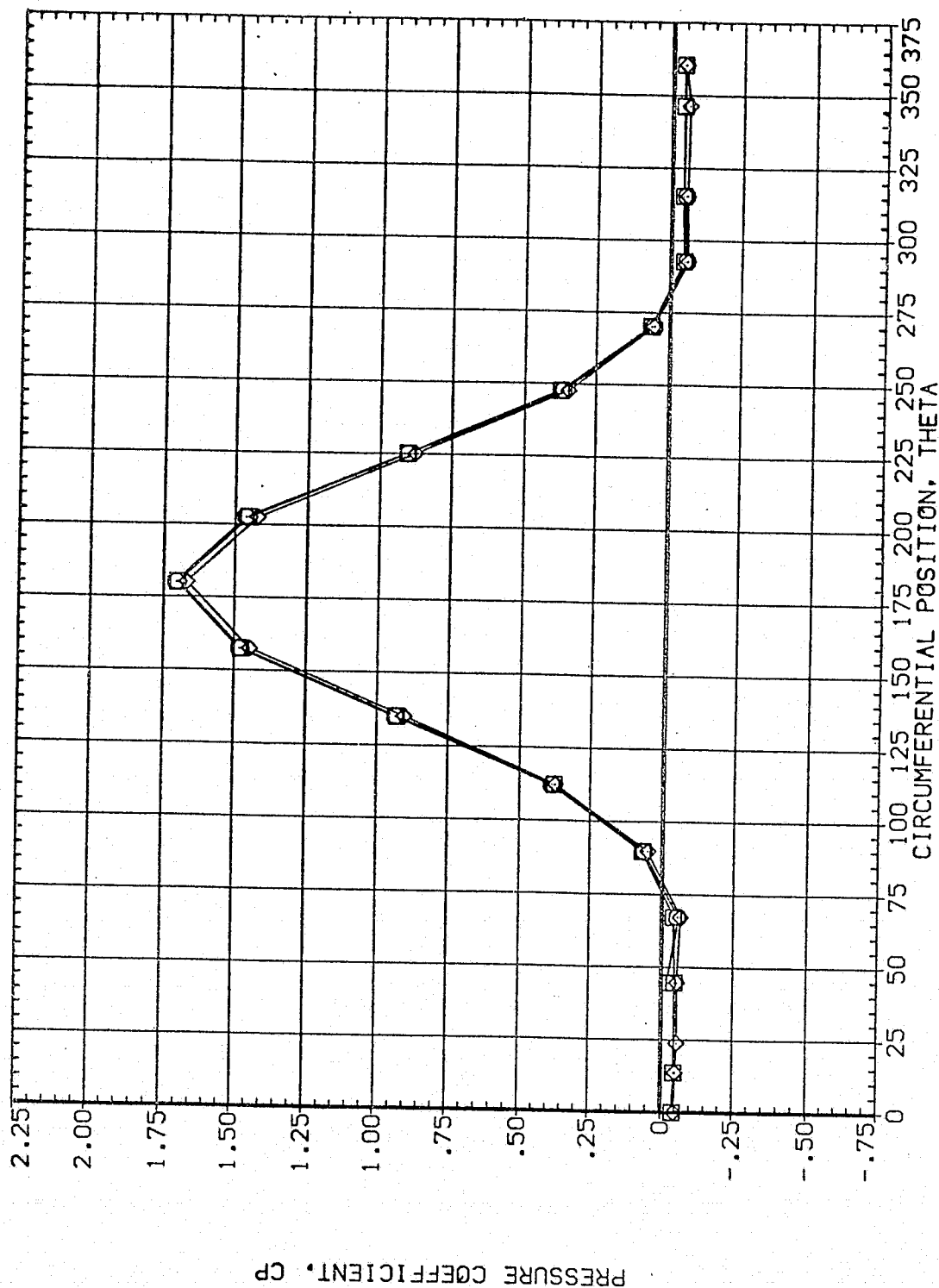


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL
○
□
◇

X/LB .892
.923
.954
ALPHA 77.880
MACH 3.480

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
OFFSET PHI .000

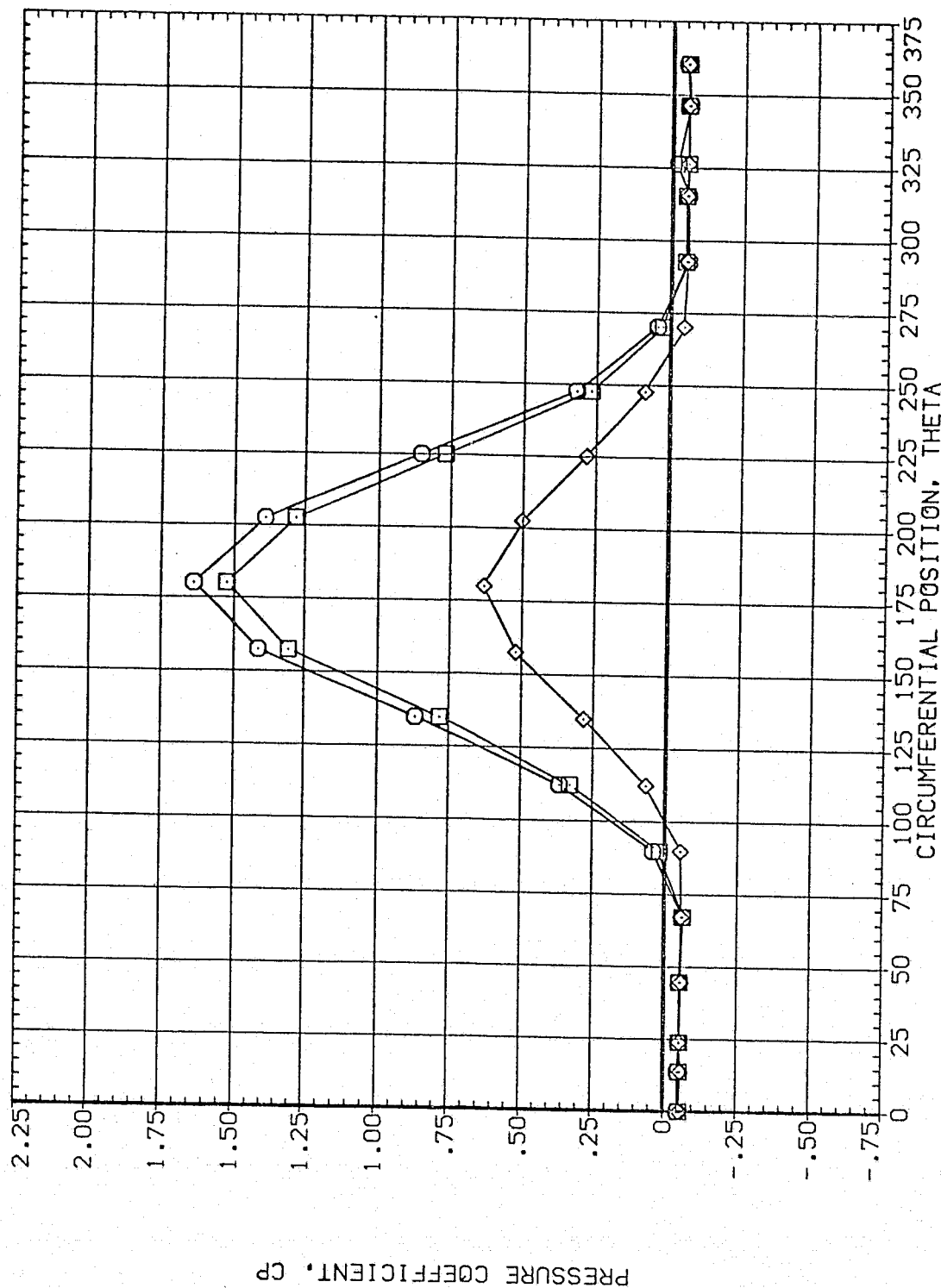


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL X/LB ALPHA MACH
 ○ .055
 □ .108
 ◇ .162

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET 90.000
 PHI .000

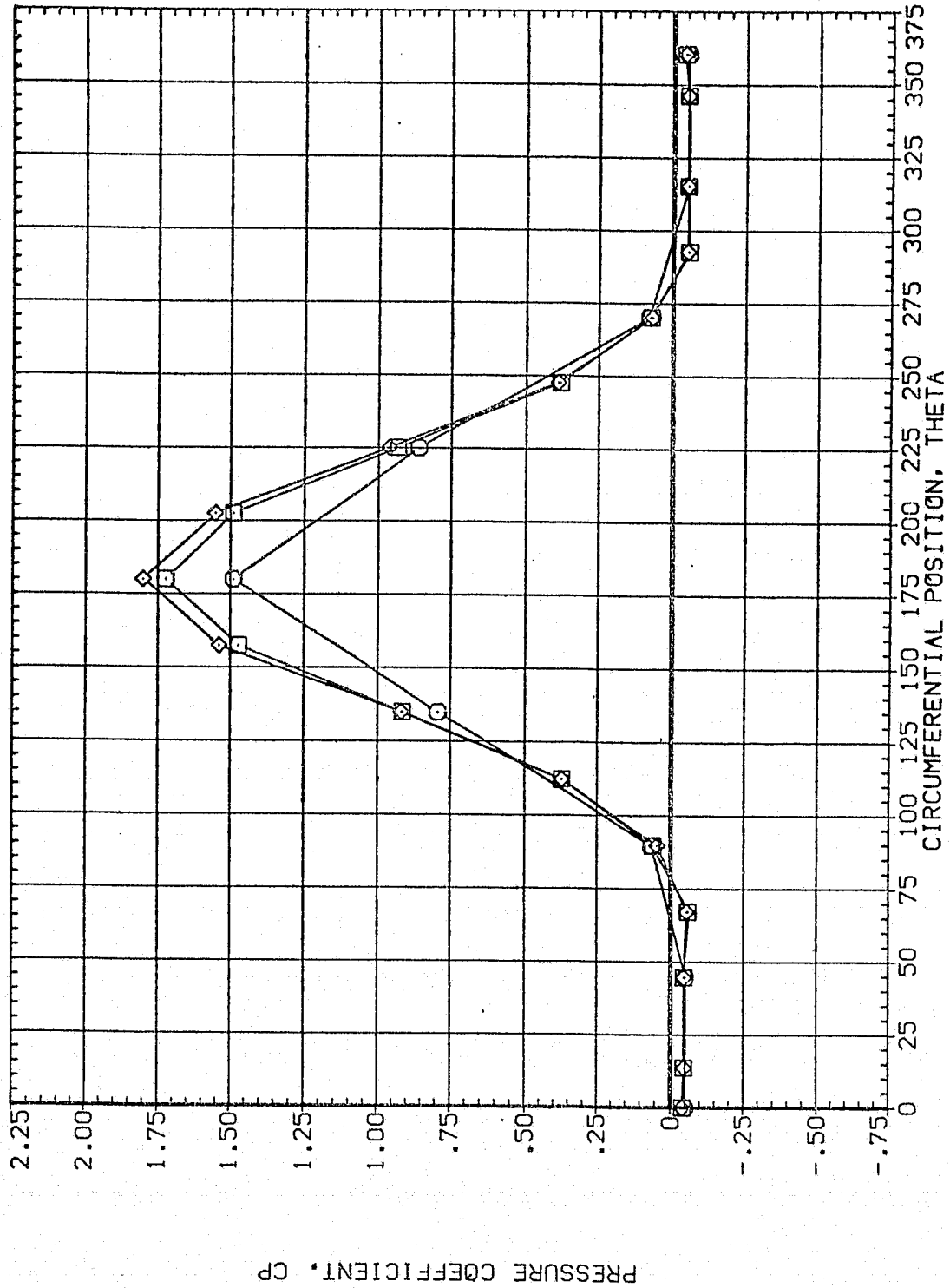


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES			
				BETA	.000	OFFSET	90.000
				MOUNT	2.000	PHI	.000

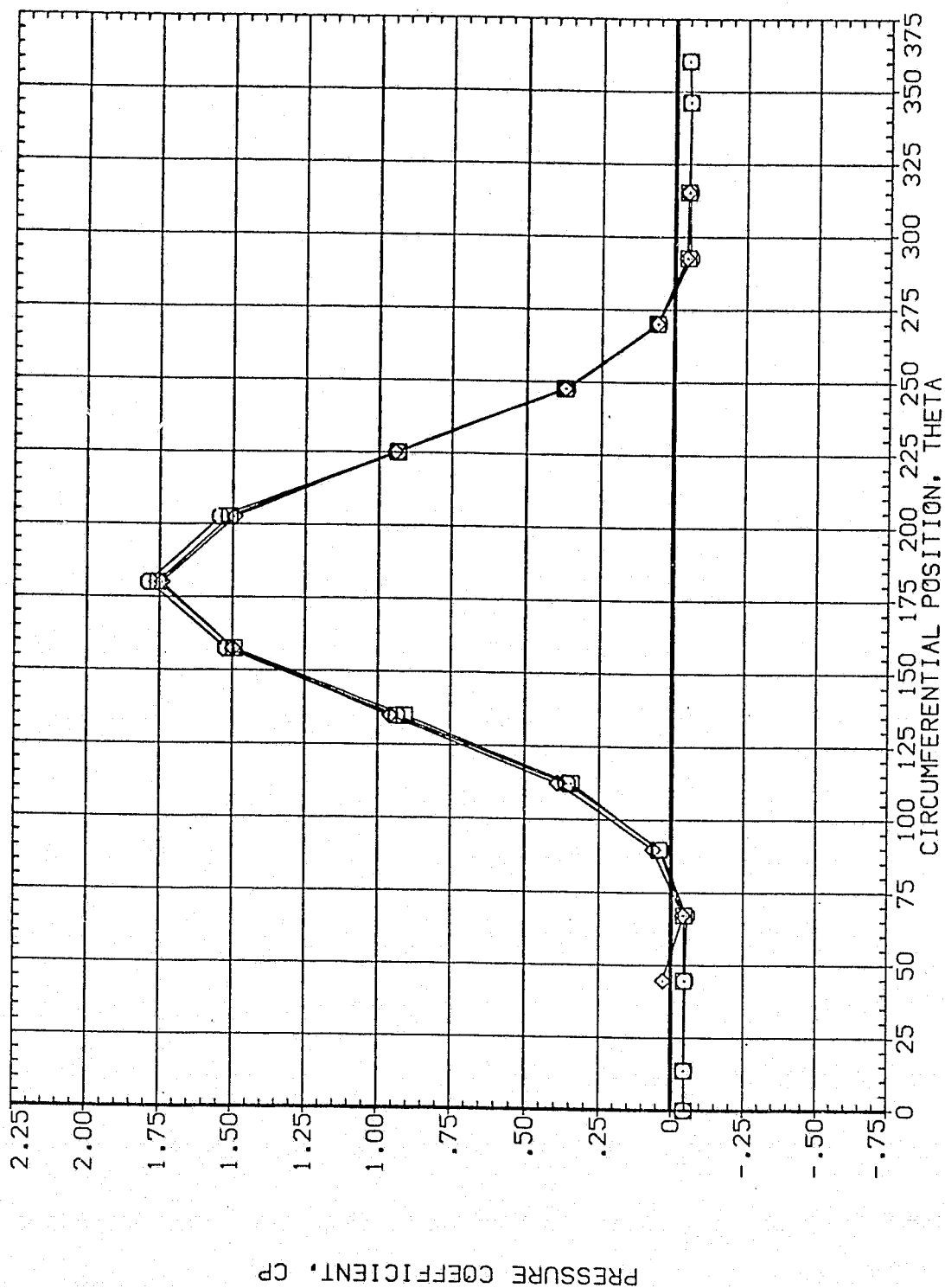


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	79.930	3.480	MOUNT	.000	.000
□	.735				2.000	
◇	.860					.000

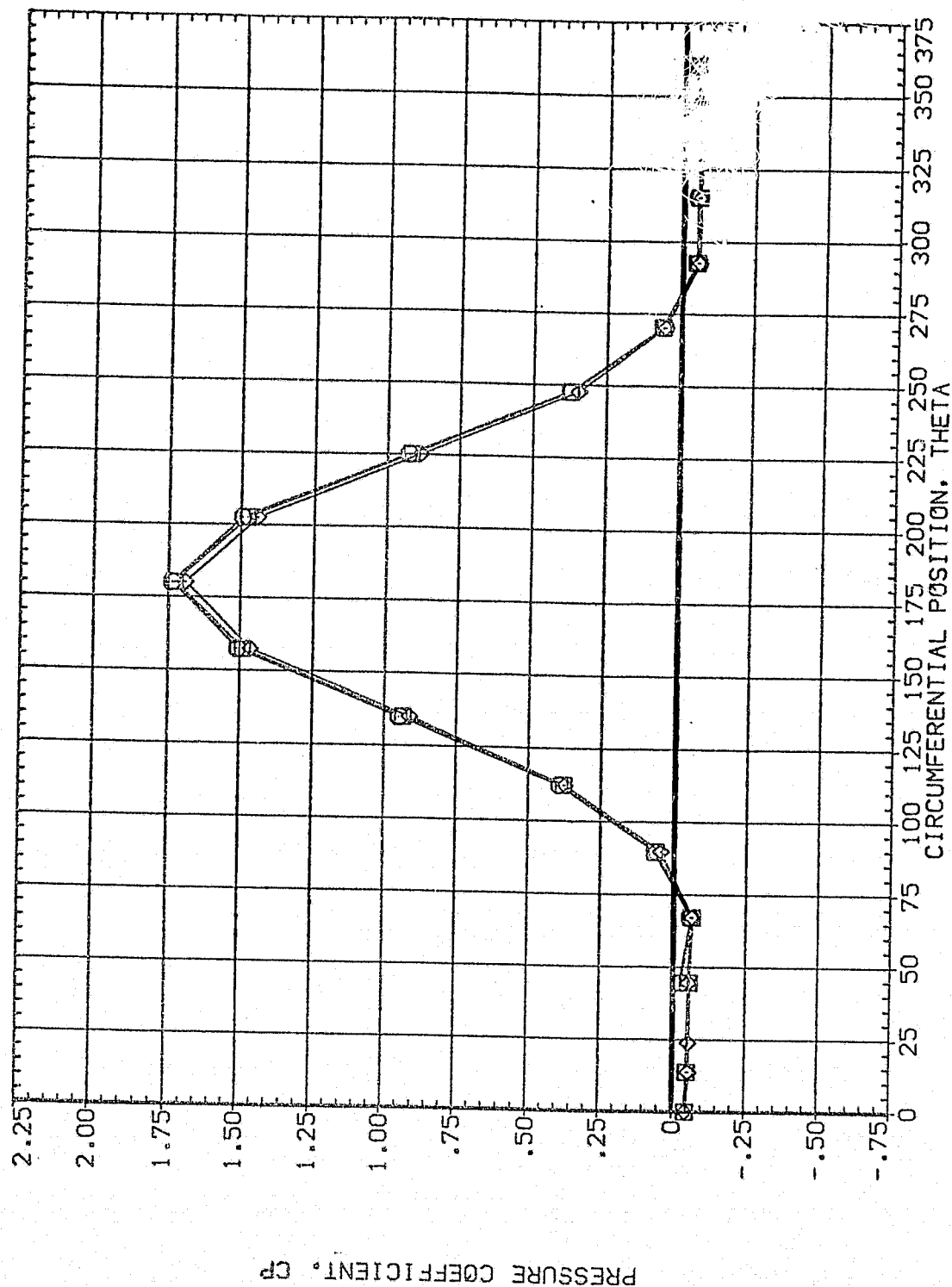


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

(P1A072)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL
○
□
◇

X/LB .892
.923
.954
ALPHA 79.930
MACH 3.480

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
OFFSET PHI 90.000
.000

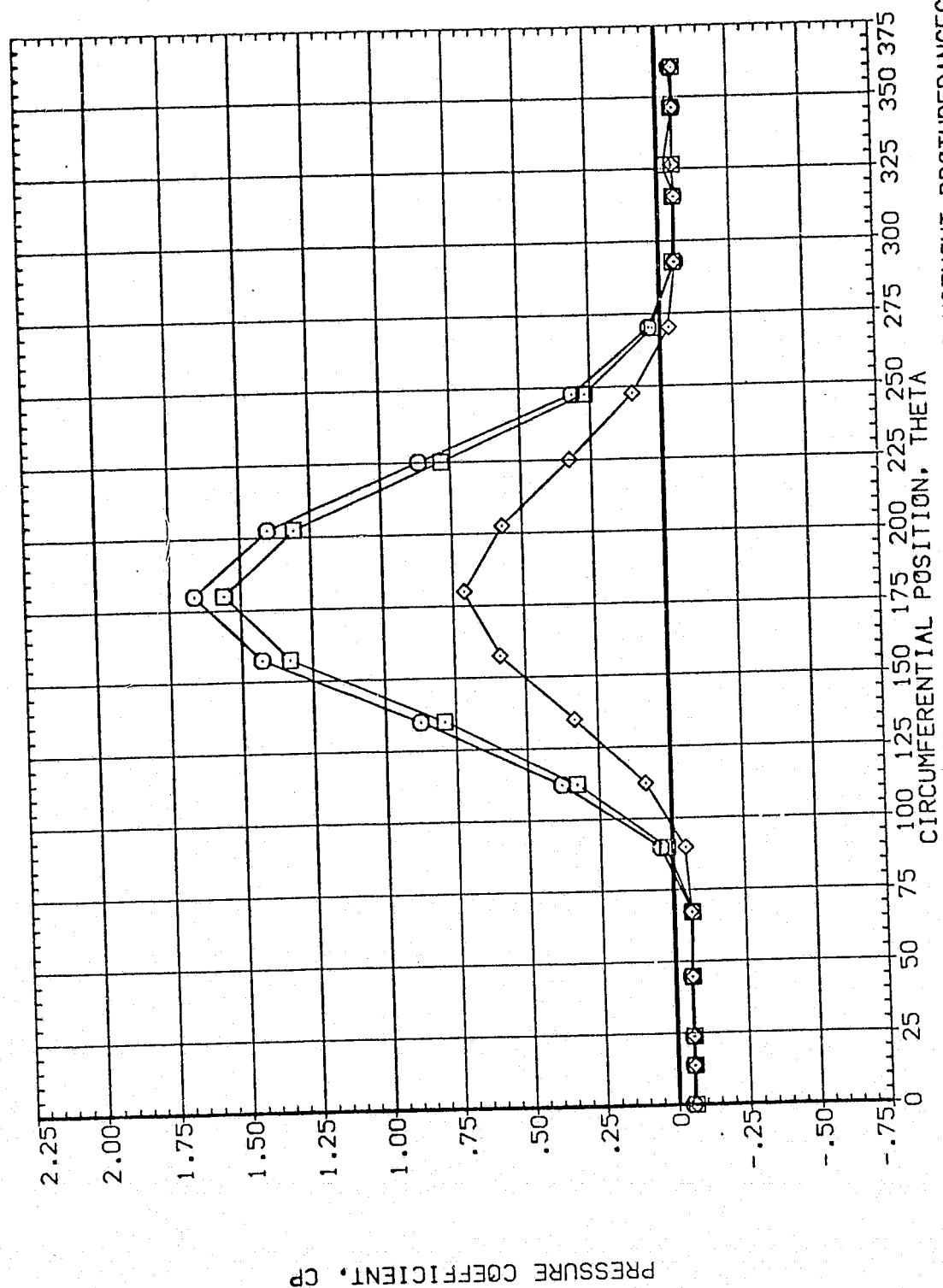


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2568

(P1A073)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET 90.000
 PHI .000

SYMBOL X/LB ALPHA MACH
 .055 81.830 3.480
 .108
 .162

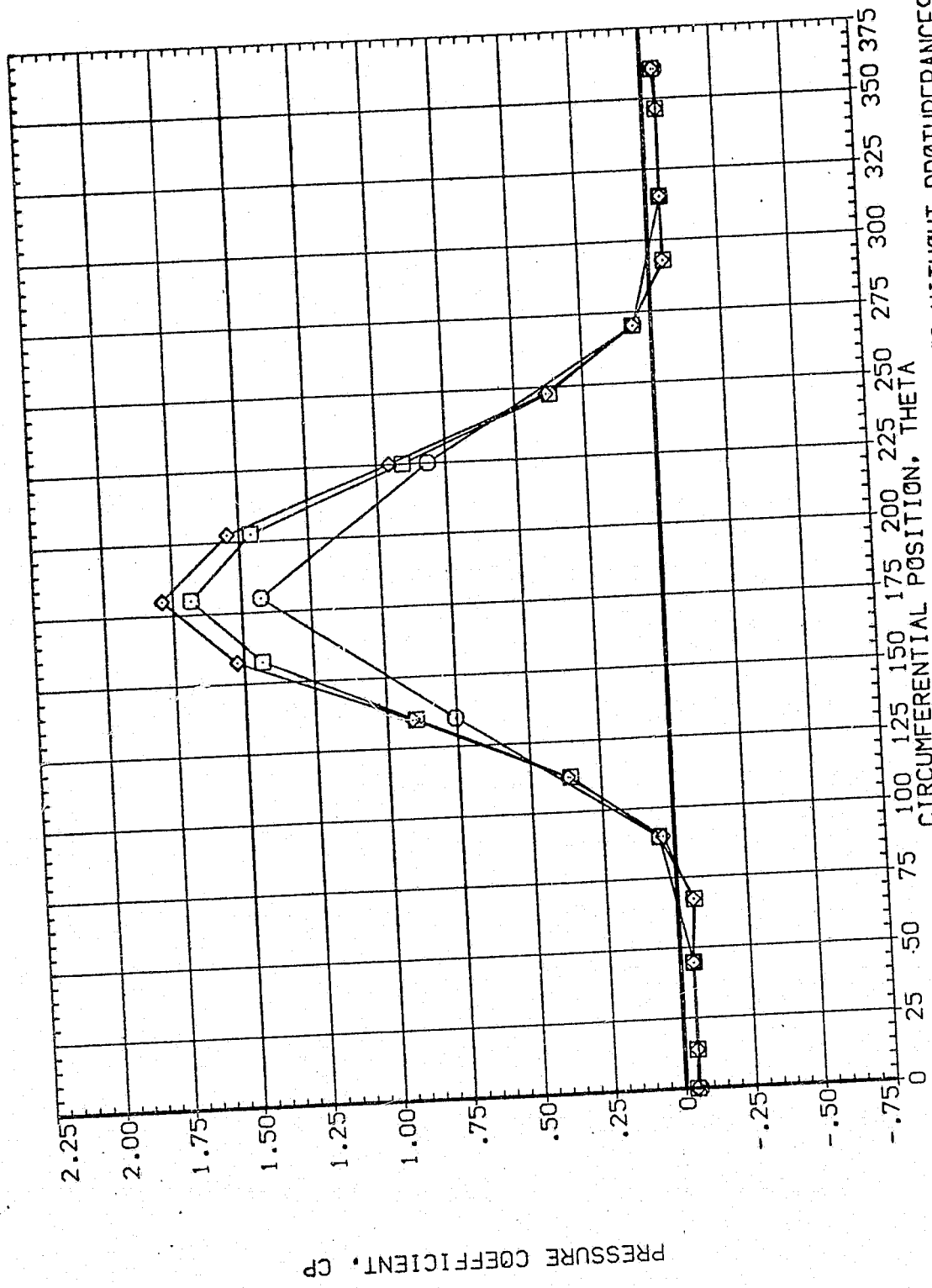


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.216	81.830	3.480	HQUNT	.000 OFFSET
□	.322				2.000 PHI
◇	.518				90.000

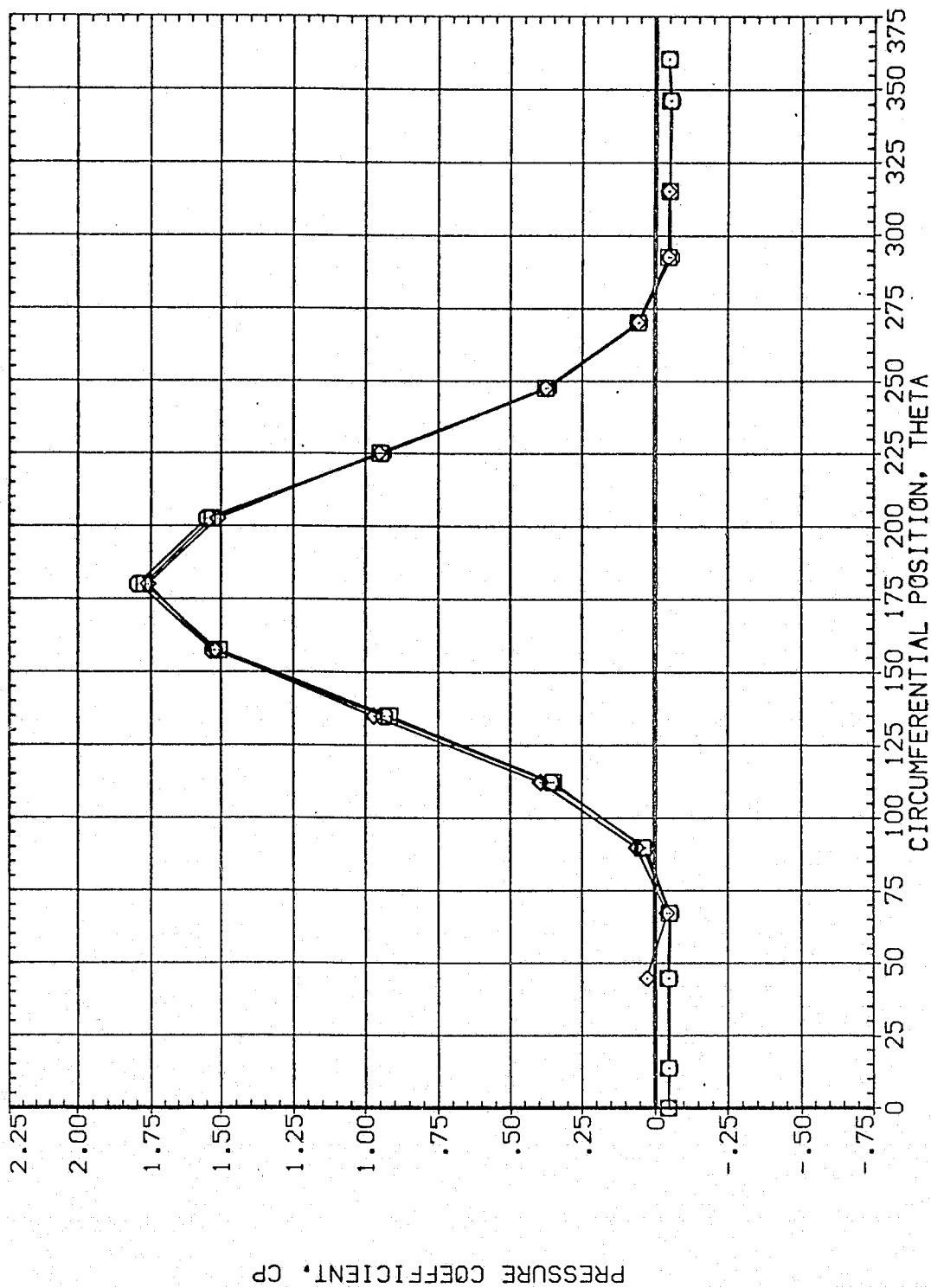


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2570

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.610	81.830	3.480	MOUNT	.000	90.000
◇	.735				2.000	.000
◇	.860					

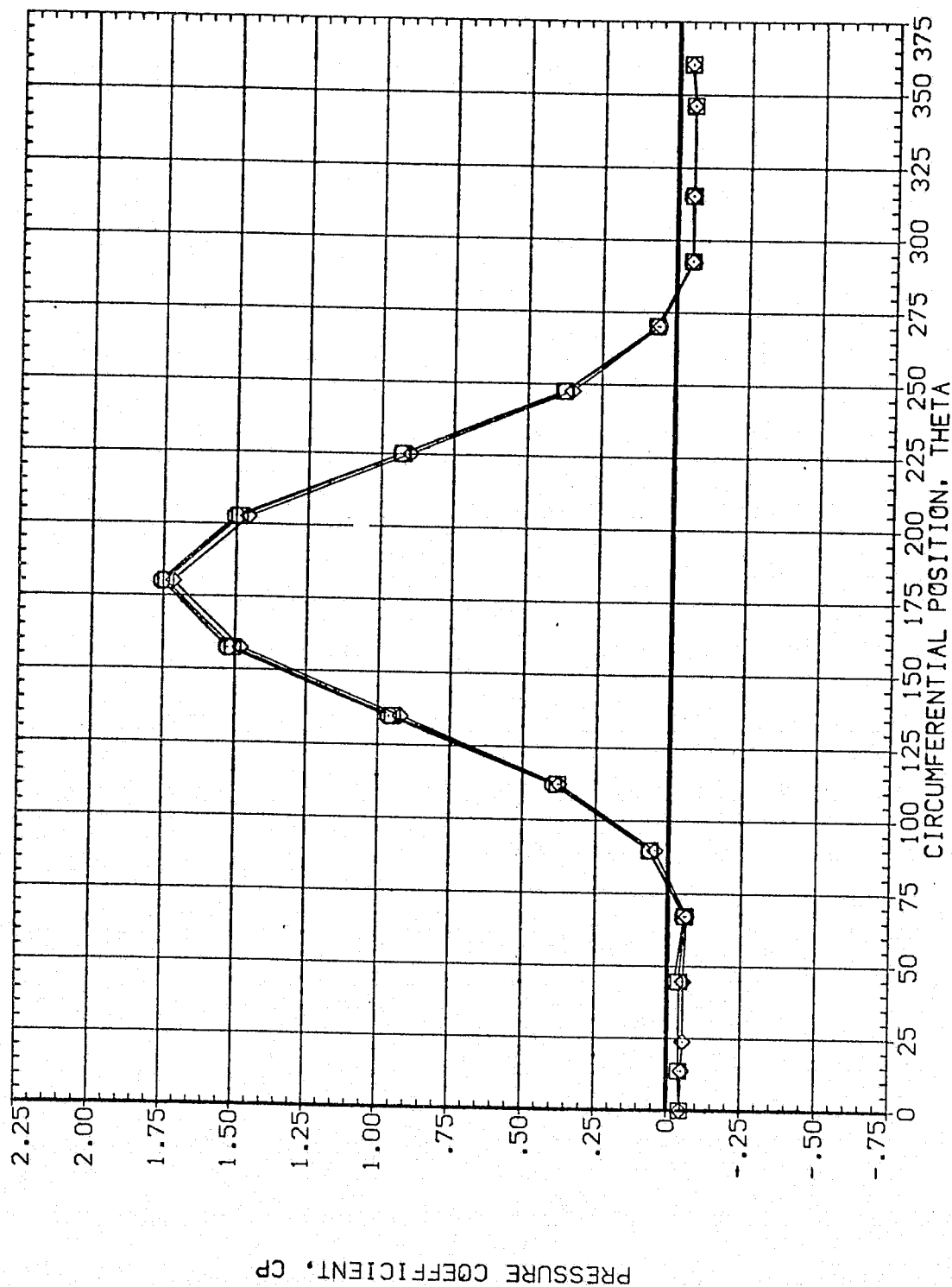


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

(P1A073)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL
□
◇

X/LB
.892
.923
.954

ALPHA
81.830

MACH
3.480

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000

OFFSET
PHI
90.000
.000

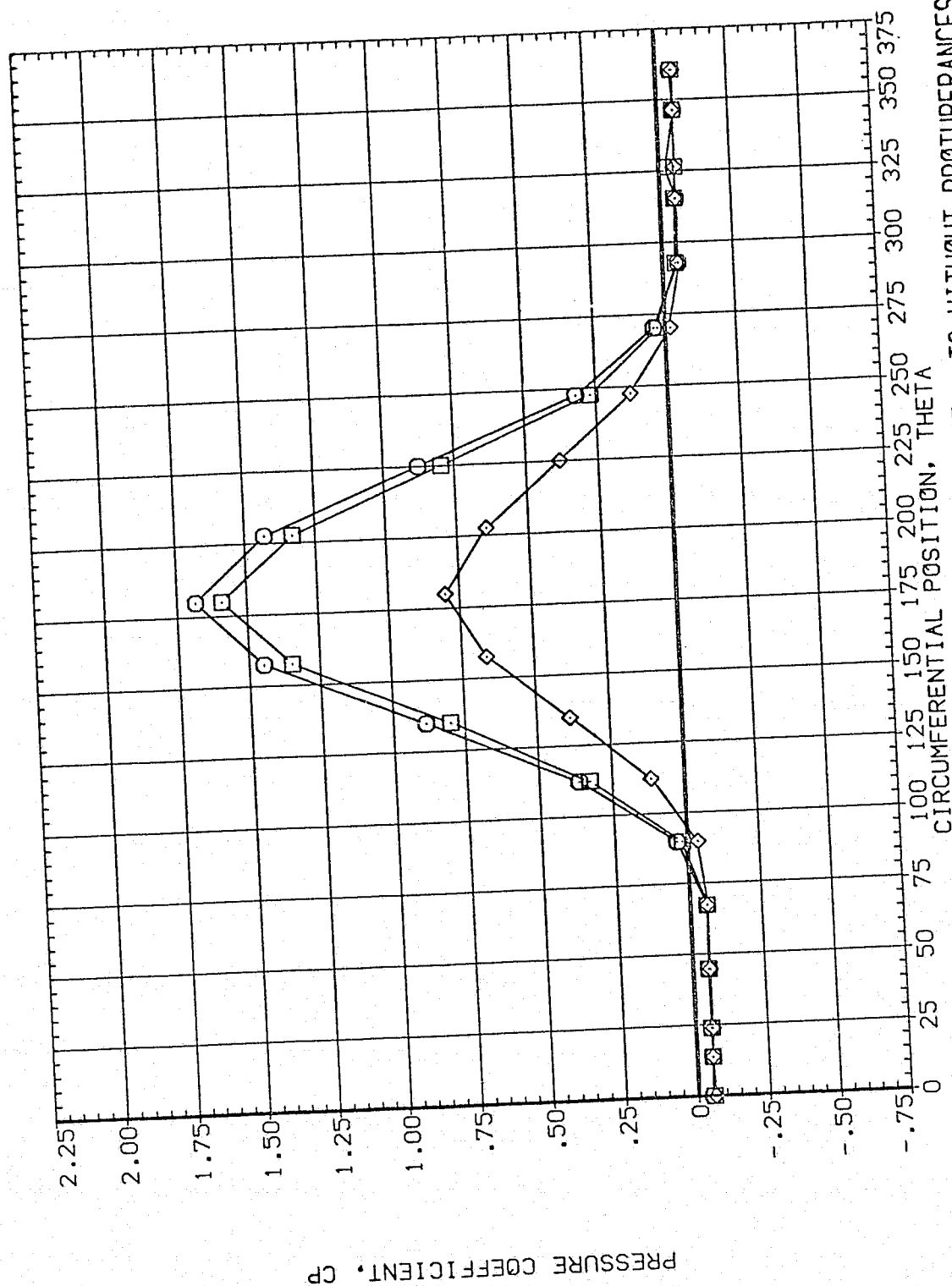


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL X/LB

.055
.108
.162

ALPHA 84.830

MACH 3.480

(P1A074)

BETA MOUNT
PARAMETRIC VALUES
.000 OFFSET
2.000 PHI
90.000
.000

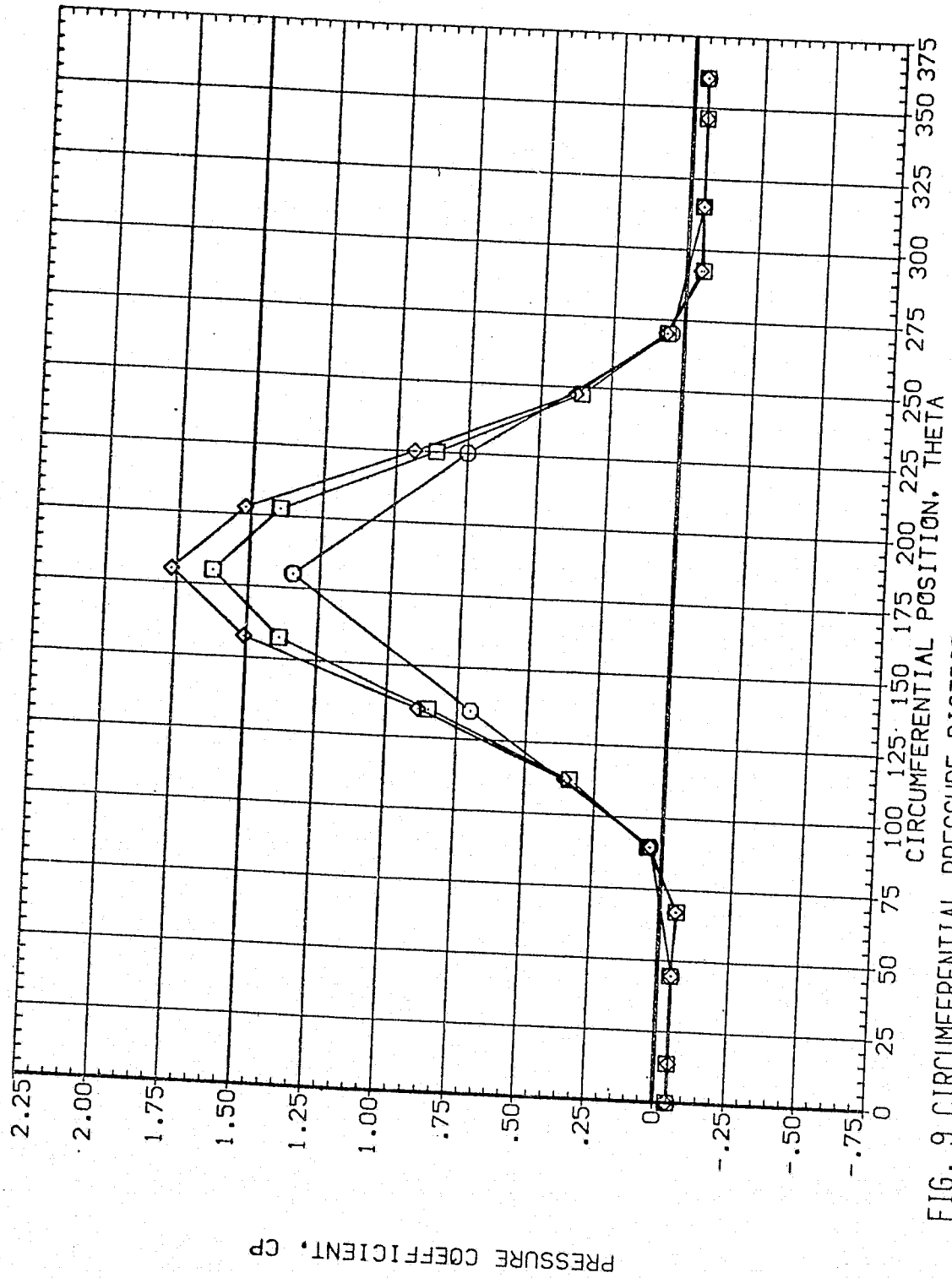


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A074)

SYMBOL

X/LB

ALPHA

MACH

84.830

3.480

.216

.322

.518

PARAMETRIC VALUES

BETA

OFFSET

PHI

2.000

90.000

.000

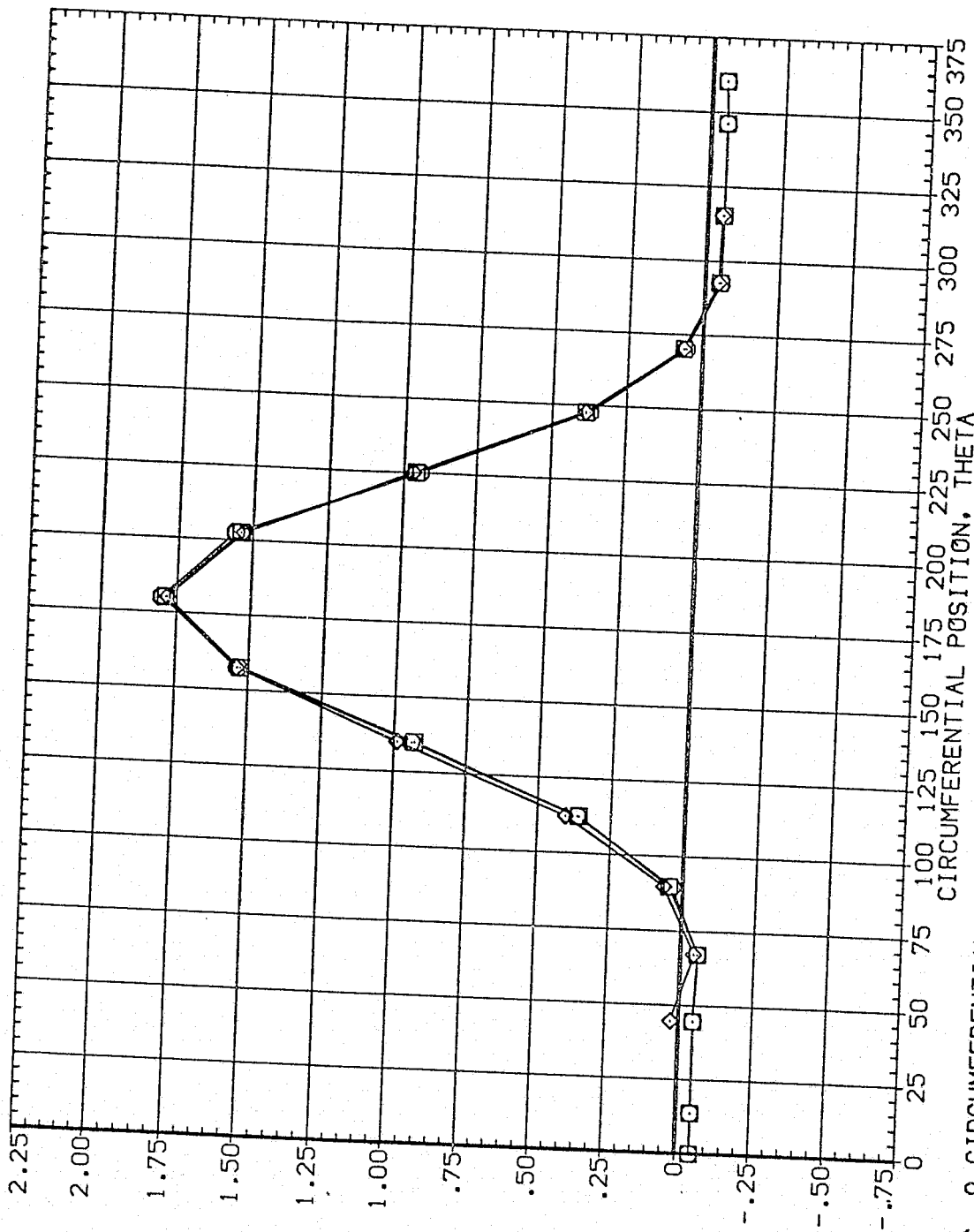


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A074)

SYMBOL X/LB

ALPHA

MACH

.610
.735
.860

84.830

3.480

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000

OFFSET
PHI

90.000
.000

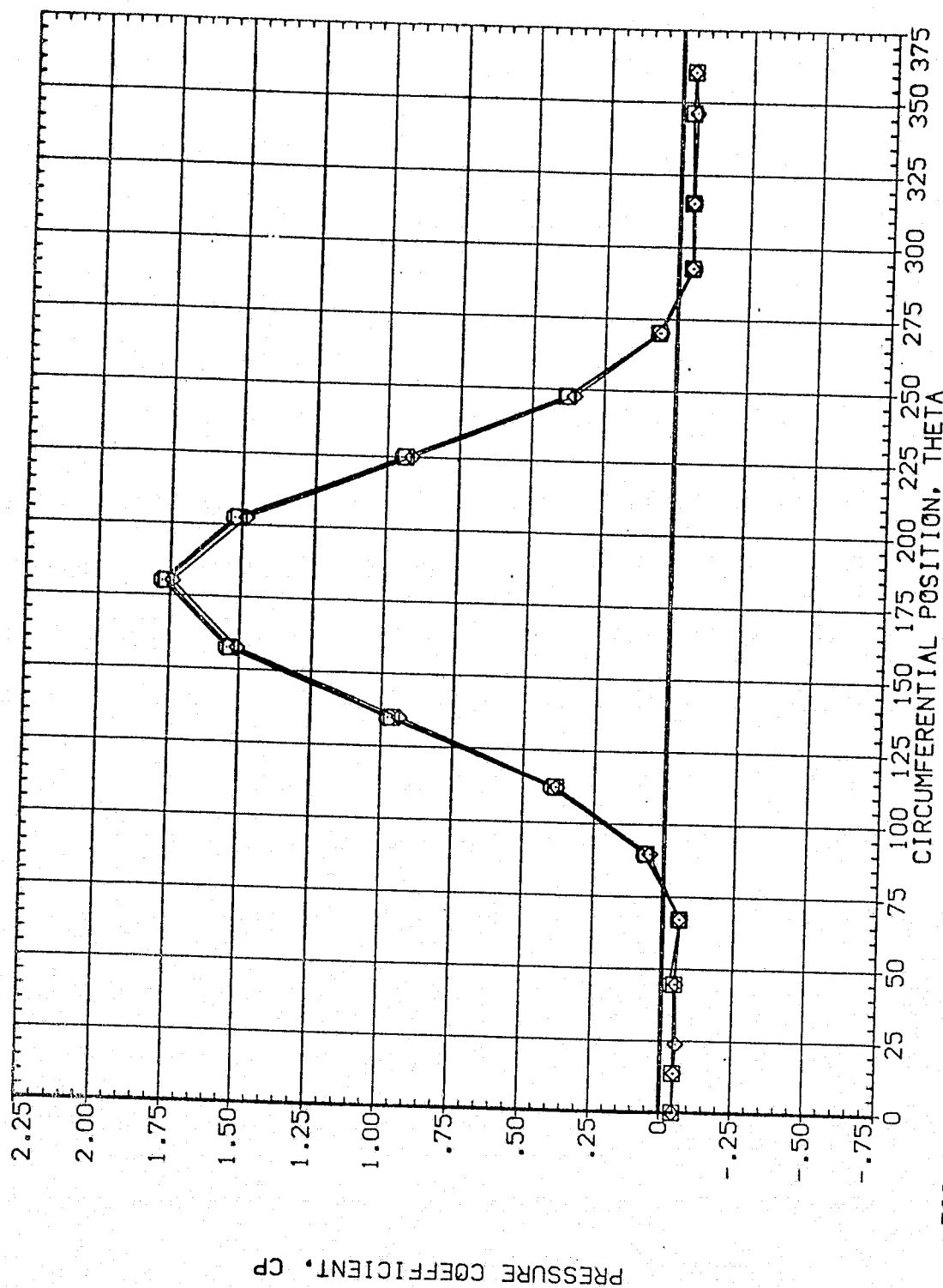


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.892	84.830	3.480	MOUNT	.000 OFFSET
□	.923				2.000 PHI
◇	.954				90.000

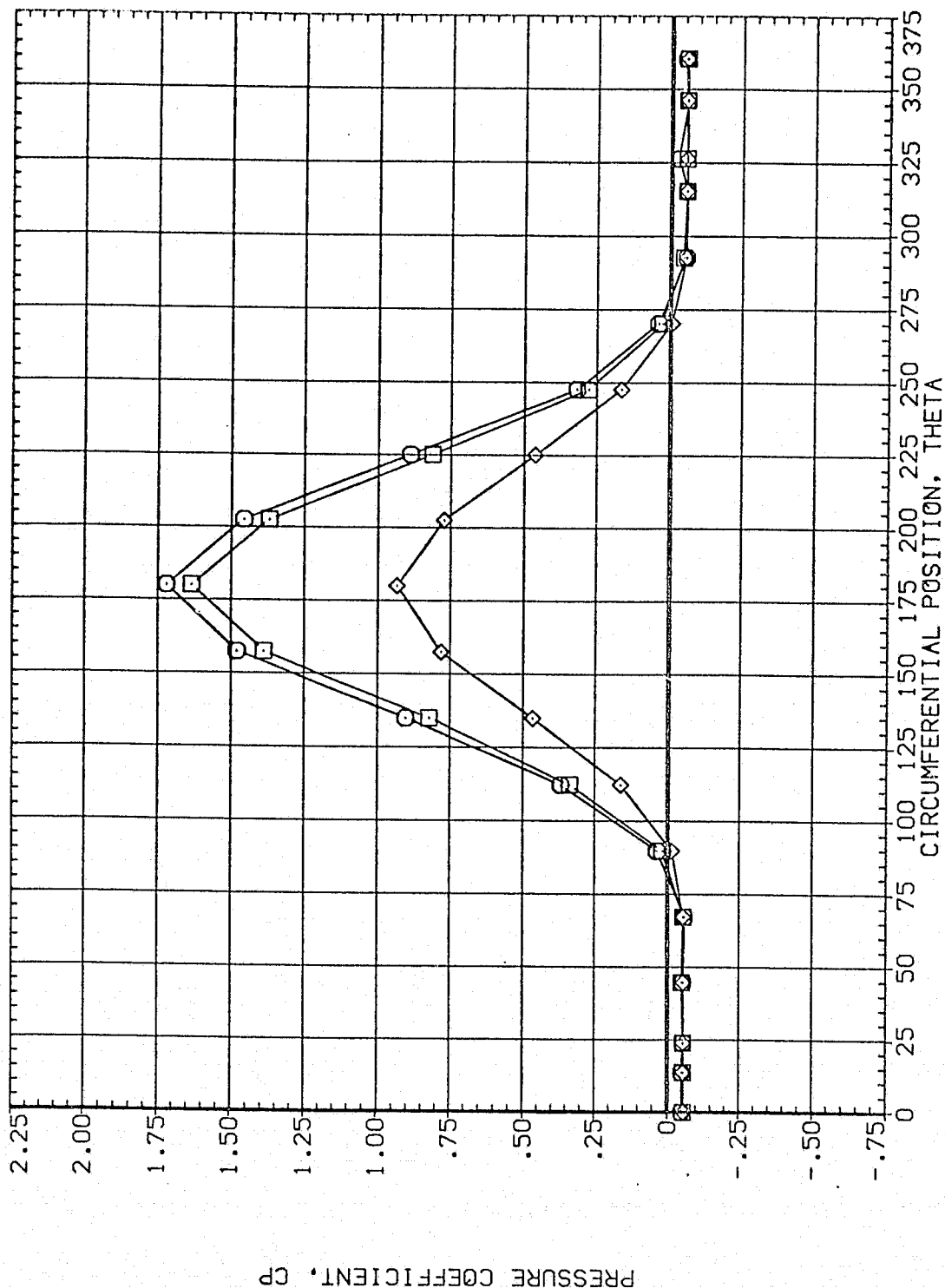


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL X/LB ALPHA MACH
 □ .055 87.830 3.480
 ○ .108
 ◇ .162

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI
 90.000
 .000

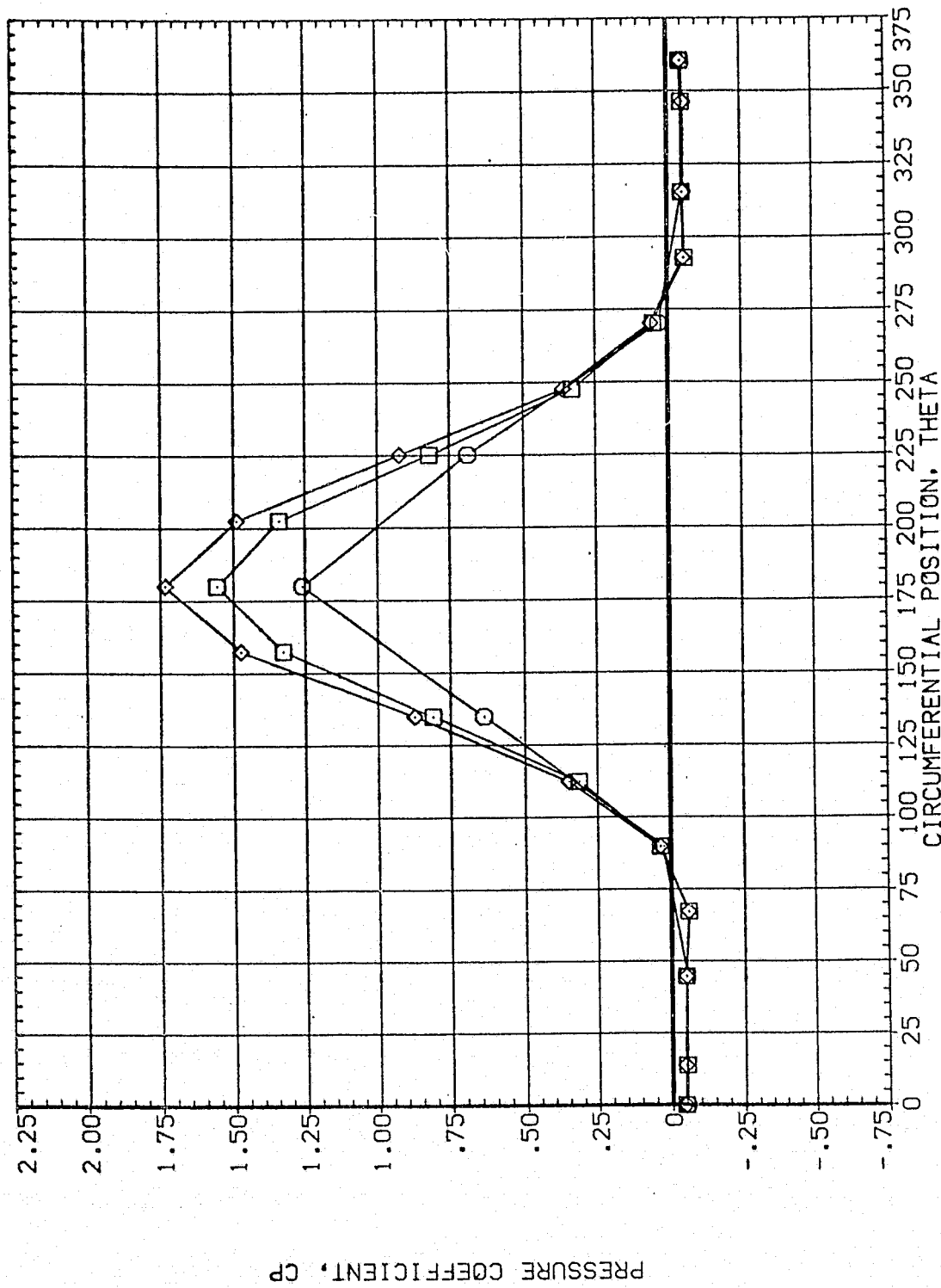


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

(P1A075)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
PHI 90.000
.000

SYMBOL X/LB ALPHA MACH
□ .216 87.830 3.480
◇ .322
◇ .518

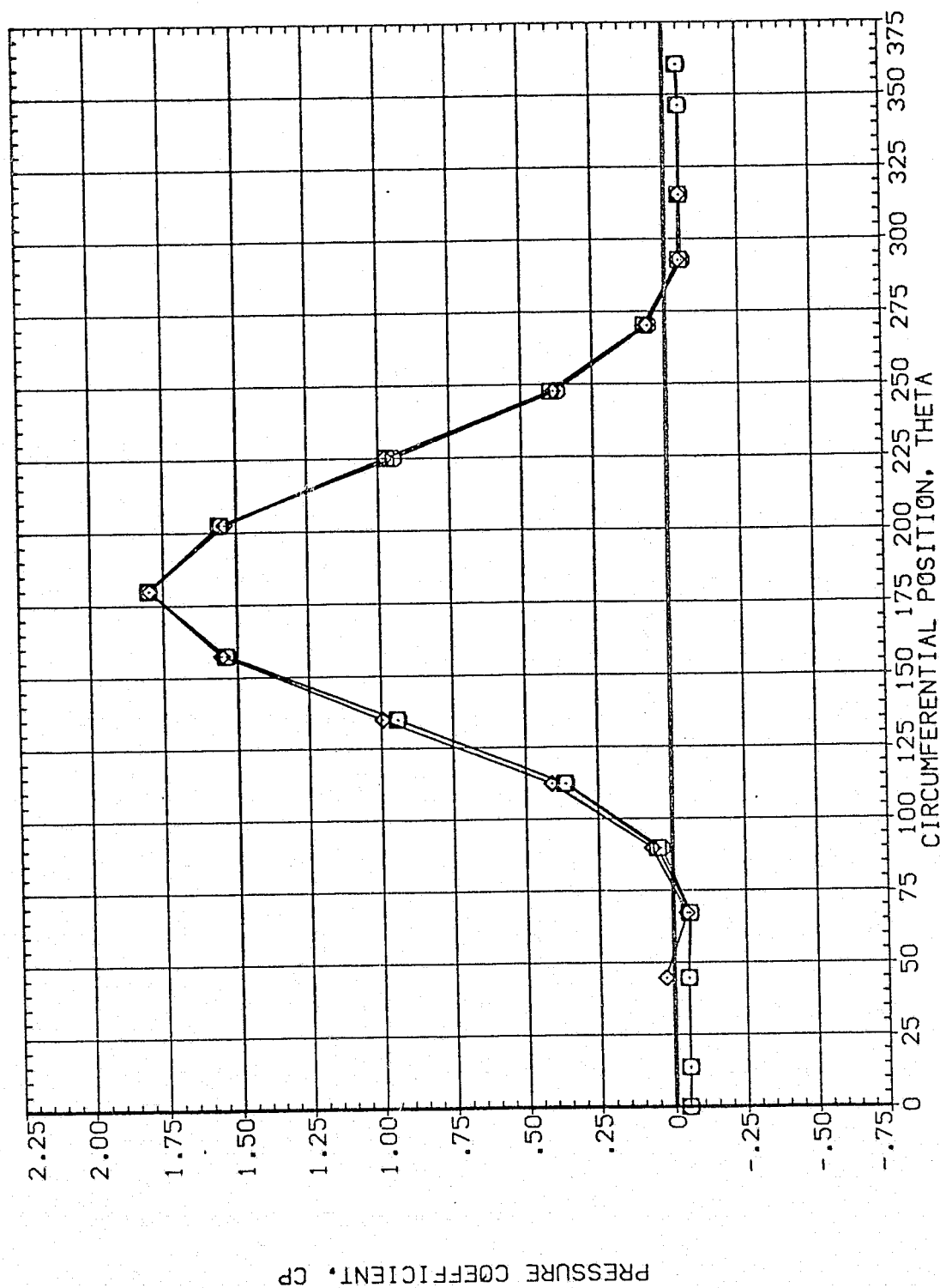


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2578

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	87.830	3.480	2.000	.000	.000
□	.735					
◇	.860					

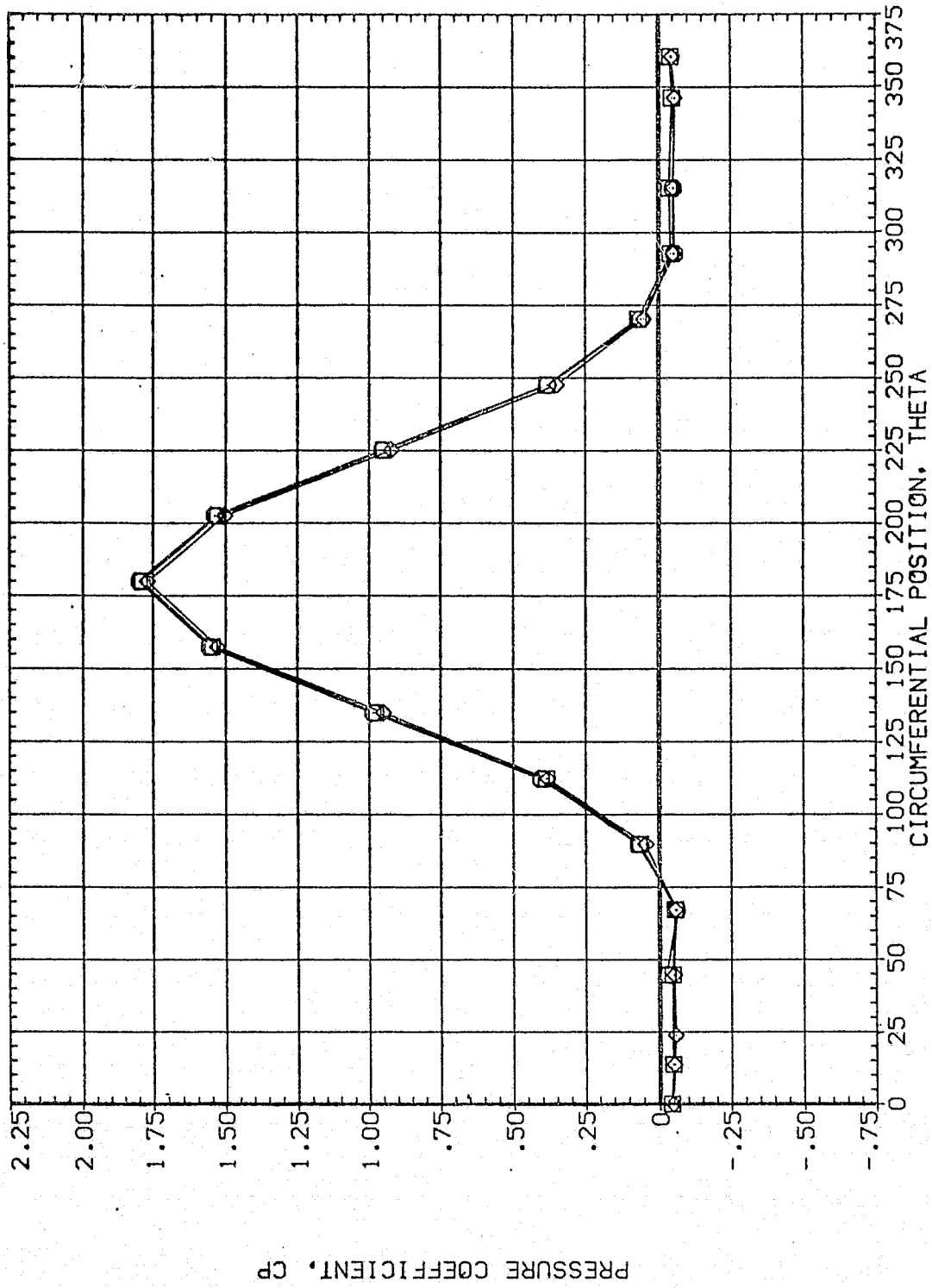


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL
 ○
 □
 ◇

X/LB
 .892
 .923
 .954

ALPHA
 87.830

MACH
 3.480

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 .000
 .000

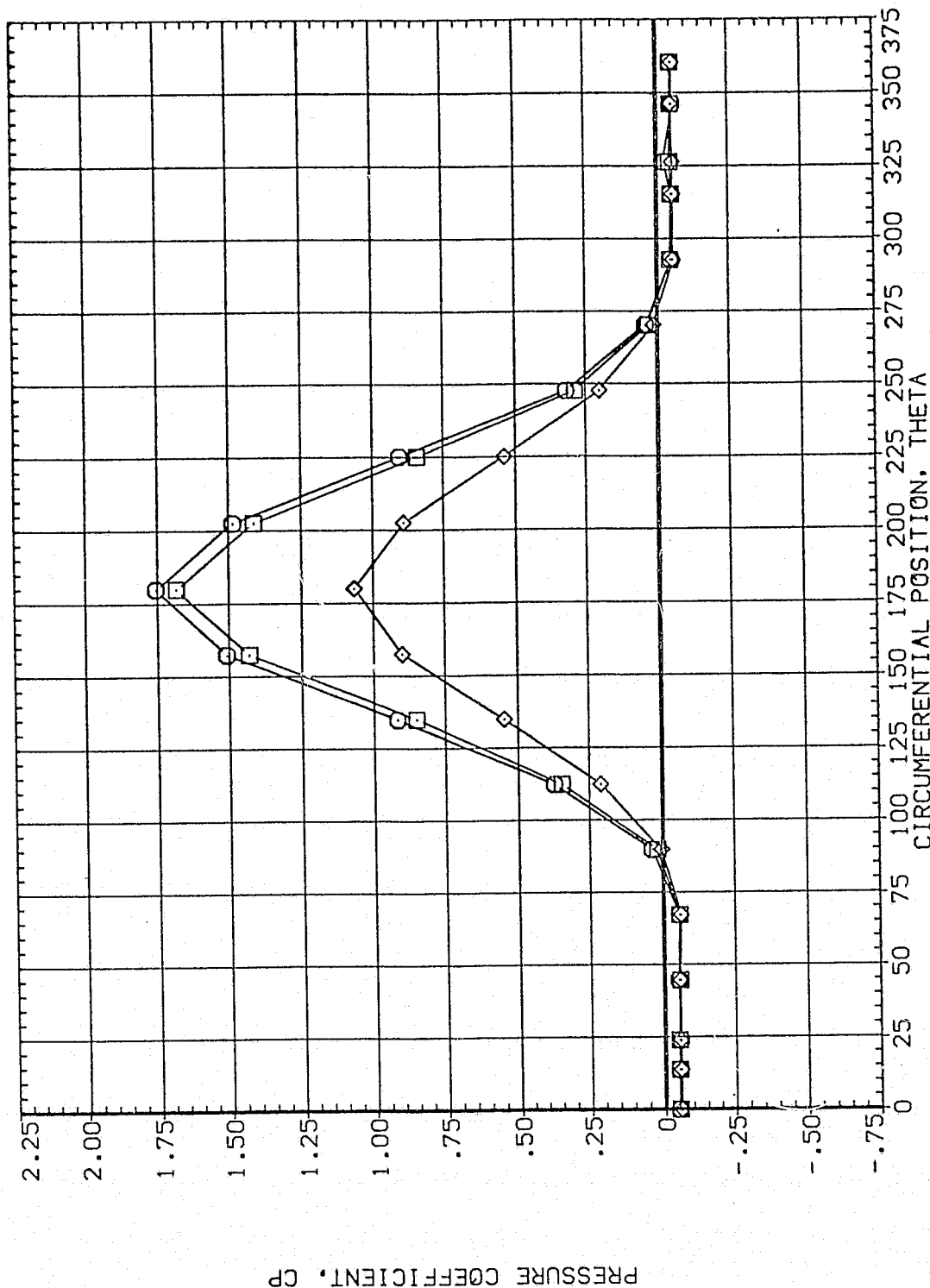


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	89.830	3.480	HOUNT	.000	.000
□	.108				2.000	
◇	.162					

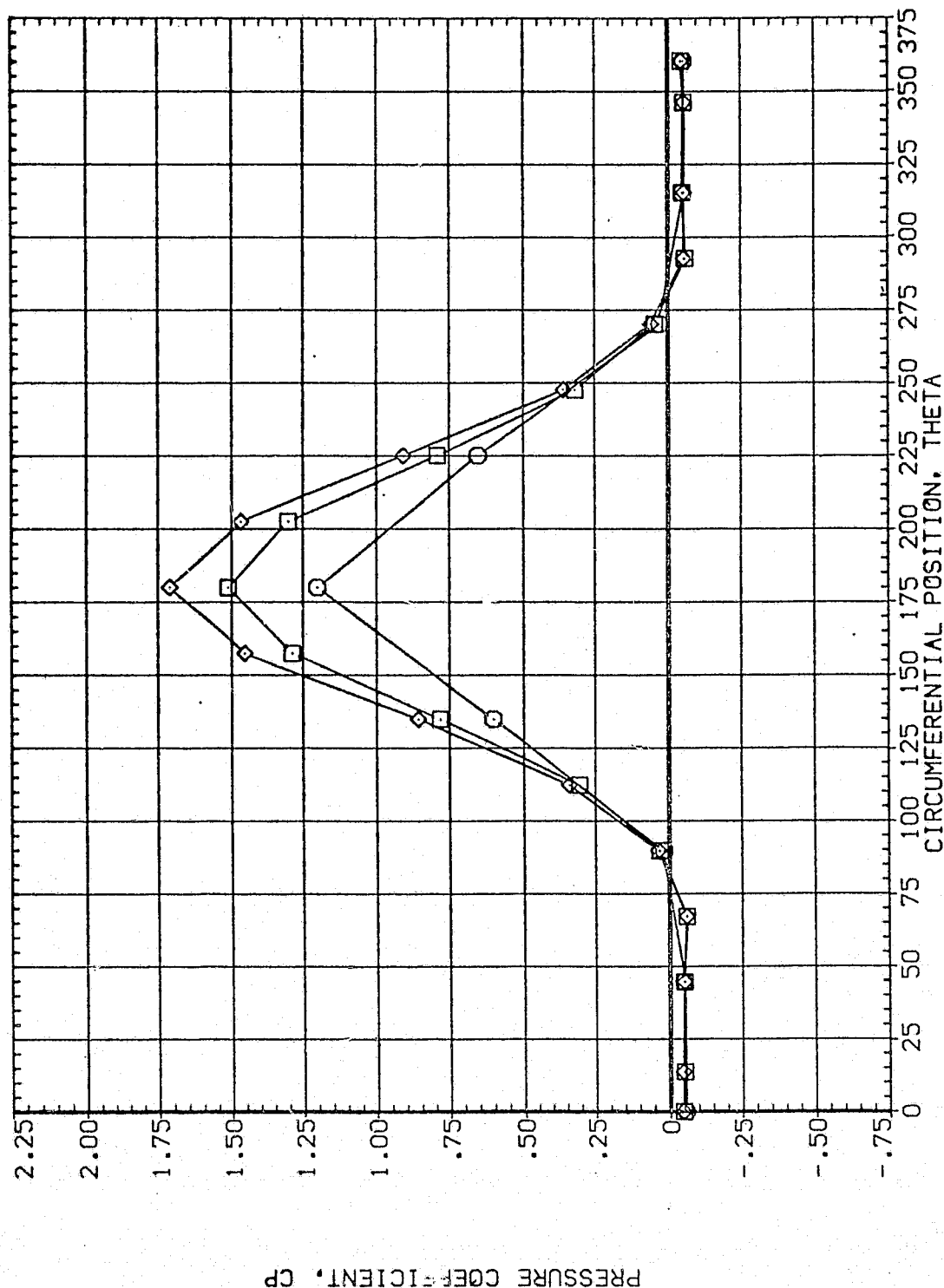


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2581

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MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL X/LB

ALPHA 89.830 MACH 3.480

BETA MOUNT

PARAMETRIC VALUES
 .000 OFFSET 96.000
 2.000 PHI .000

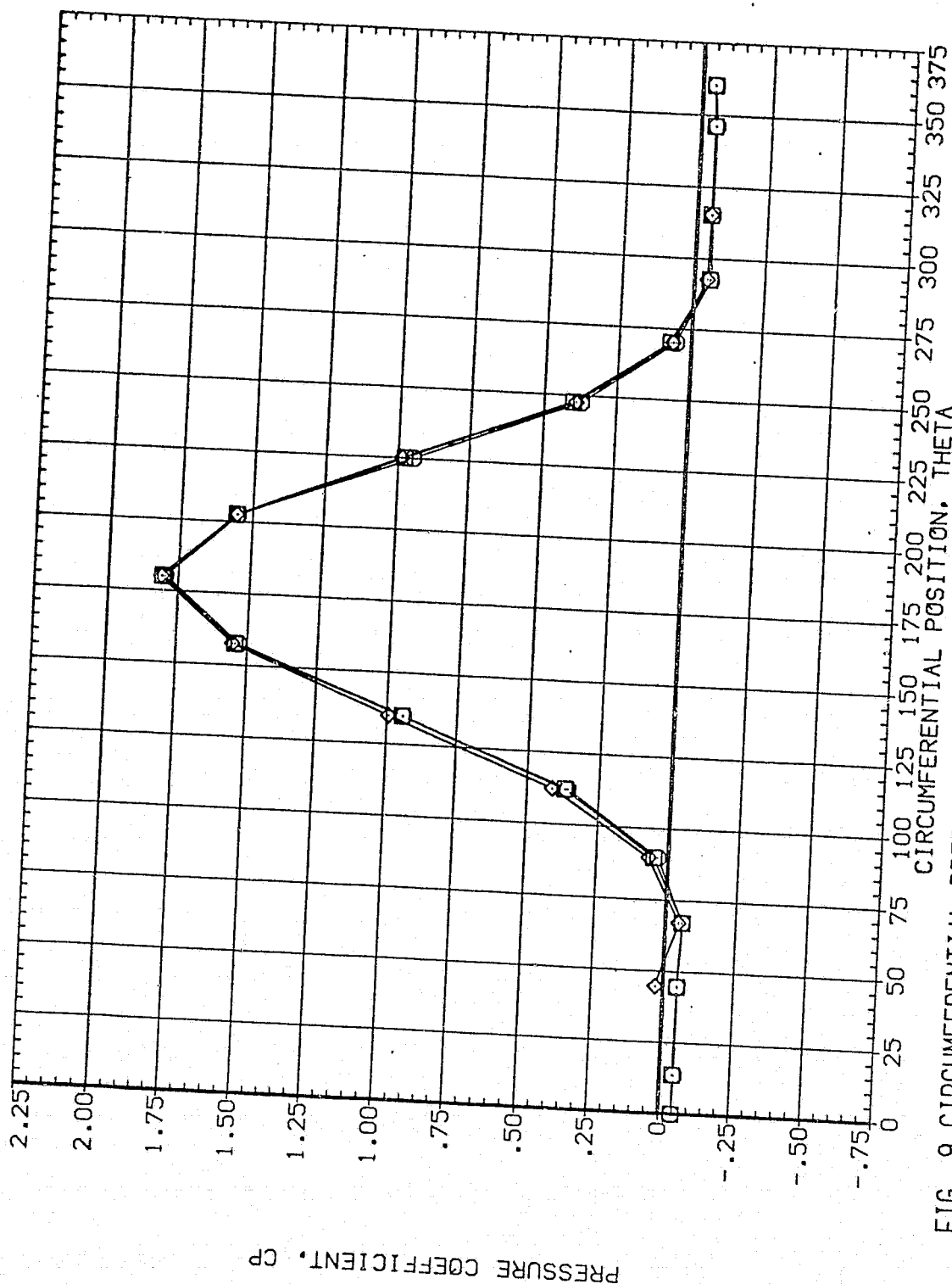


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.610	89.830	3.480	MBUNT	.000	90.000
◇	.735				2.000	.000
◇	.860					

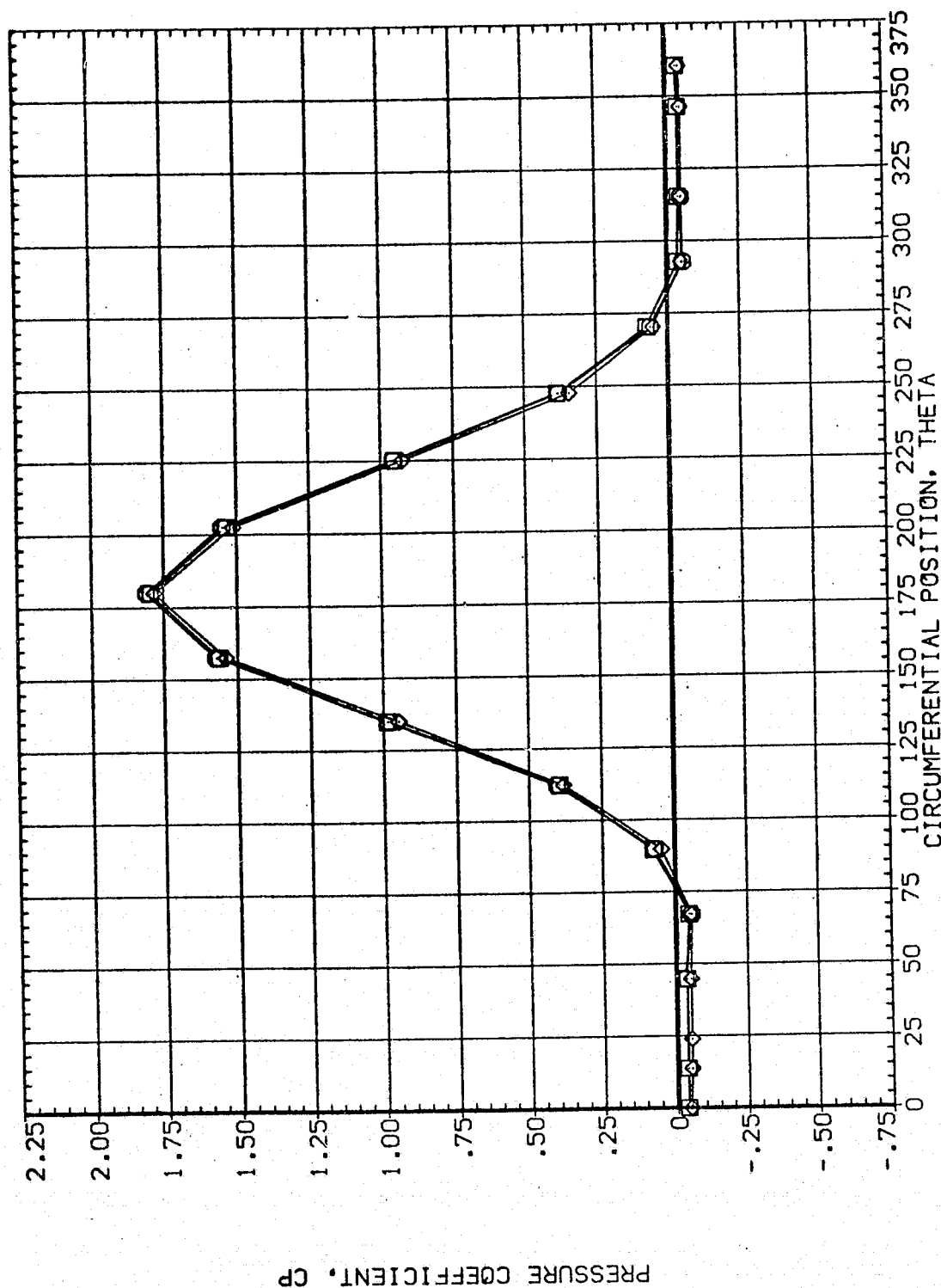


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.892	89.830	3.480	MOUNT	.000	.000
□	.923				2.000	
◇	.954					90.000

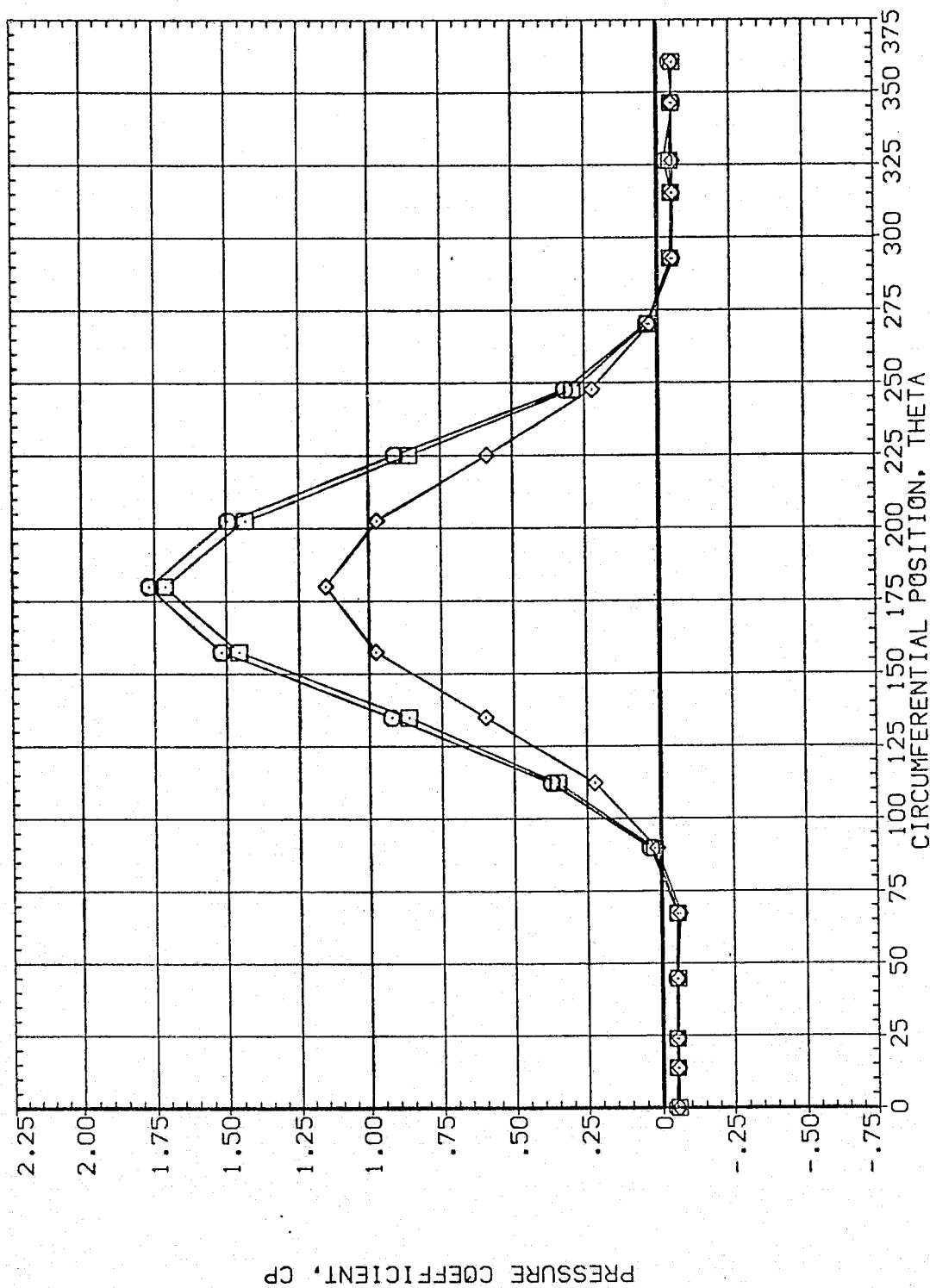


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2584

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.055	91.850	3.480	.000	.000	.000
◇	.108			2.000		
◇	.162					

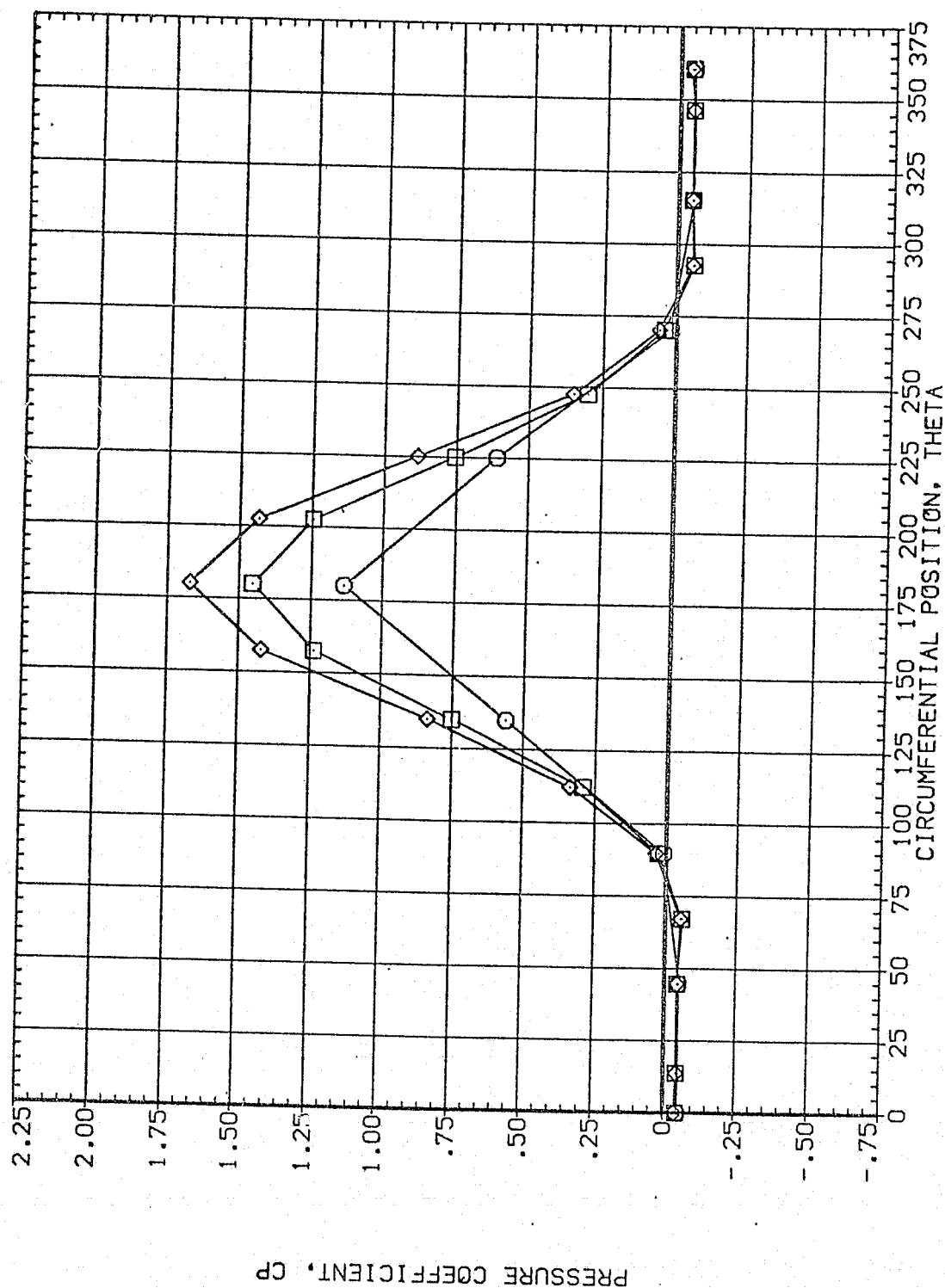


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL X/LB ALPHA MACH
 □ .216 91.850 3.480
 ◇ .322 .518

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

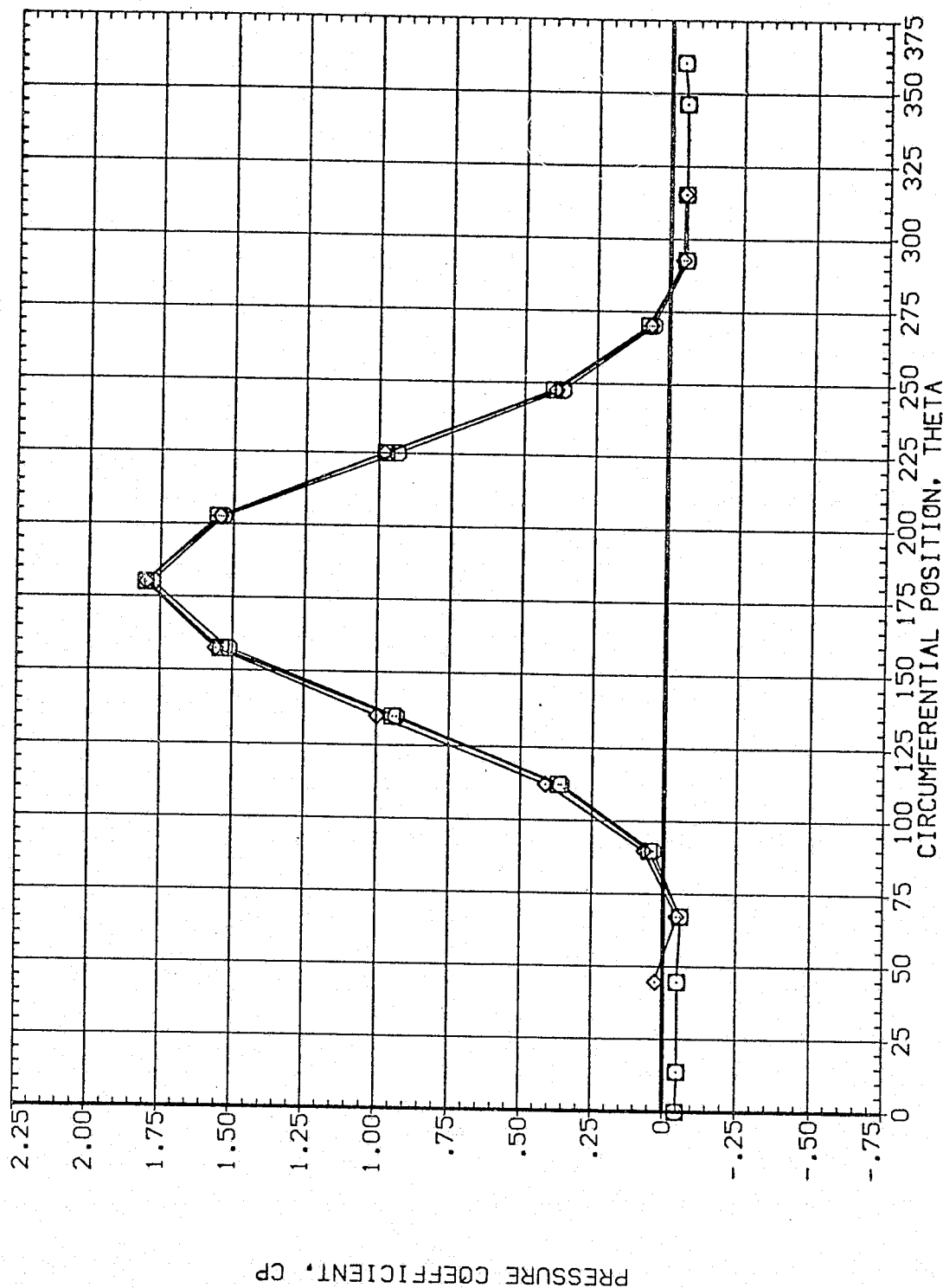


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.610	91.850	3.480	OUNT	.000	.000
◇	.735				2.000	
	.860					

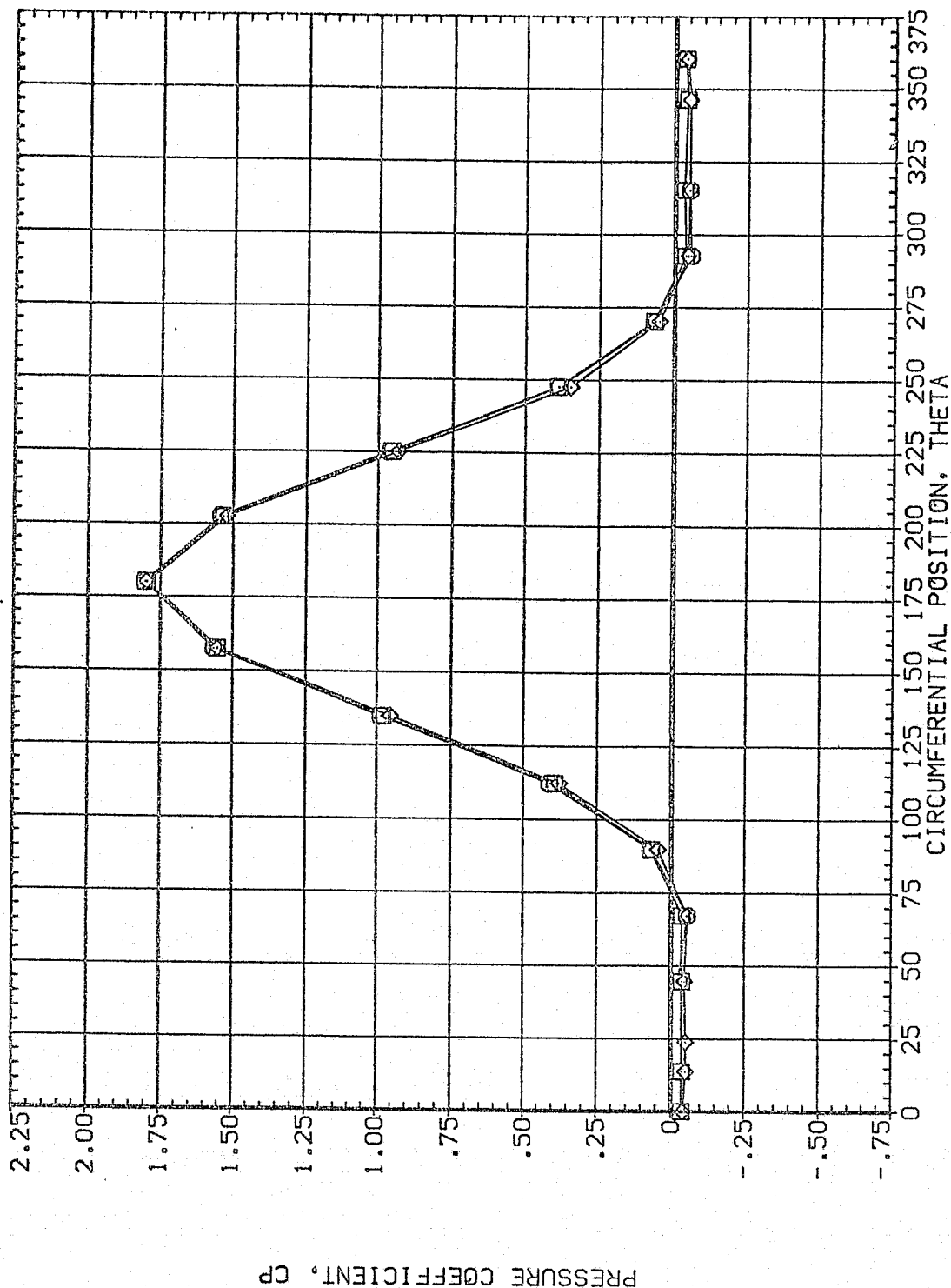


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL X/LB ALPHA MACH
 ○ .892 91.850 3.480
 □ .923
 ◇ .954

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI .000

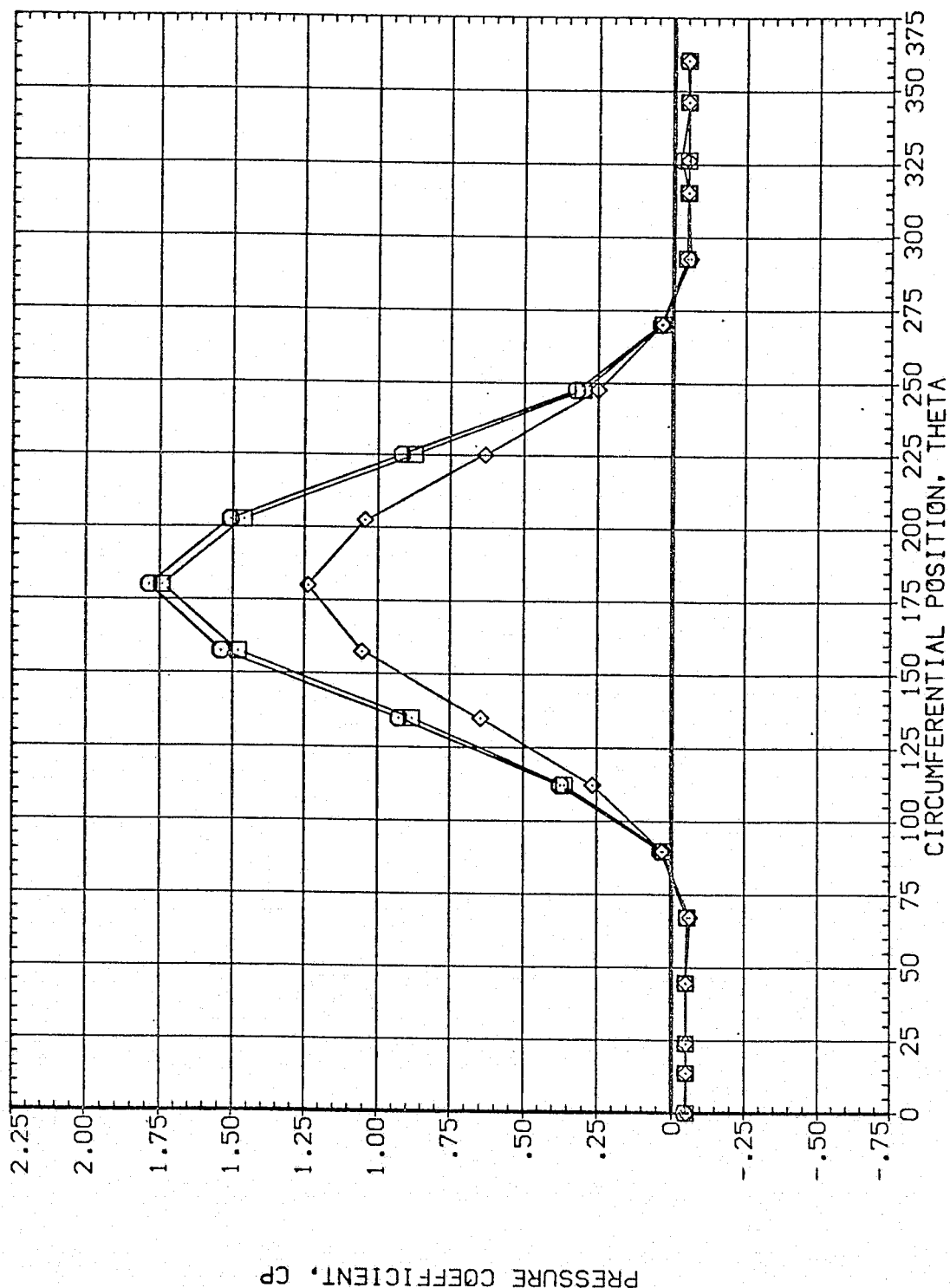


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES		
					.000	OFFSET	50.000
□	.055	94.850	3.480	1000	2.000	PHI	.000
◇	.162						

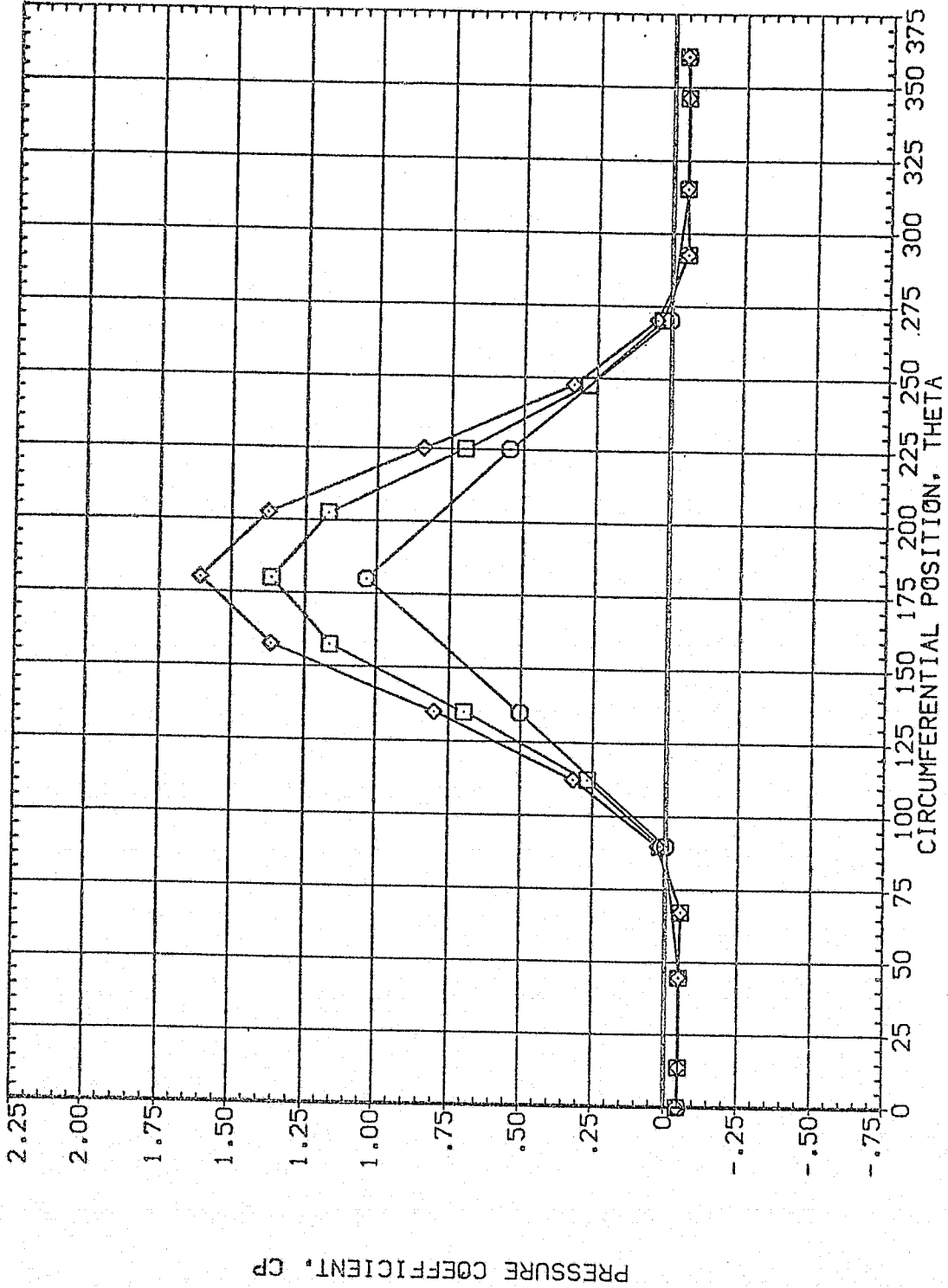


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

PAGE 2589

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.216	94.850	3.480	MOUNT	.000 OFFSET
□	.322				2.000 PHI
◇	.518				90.000

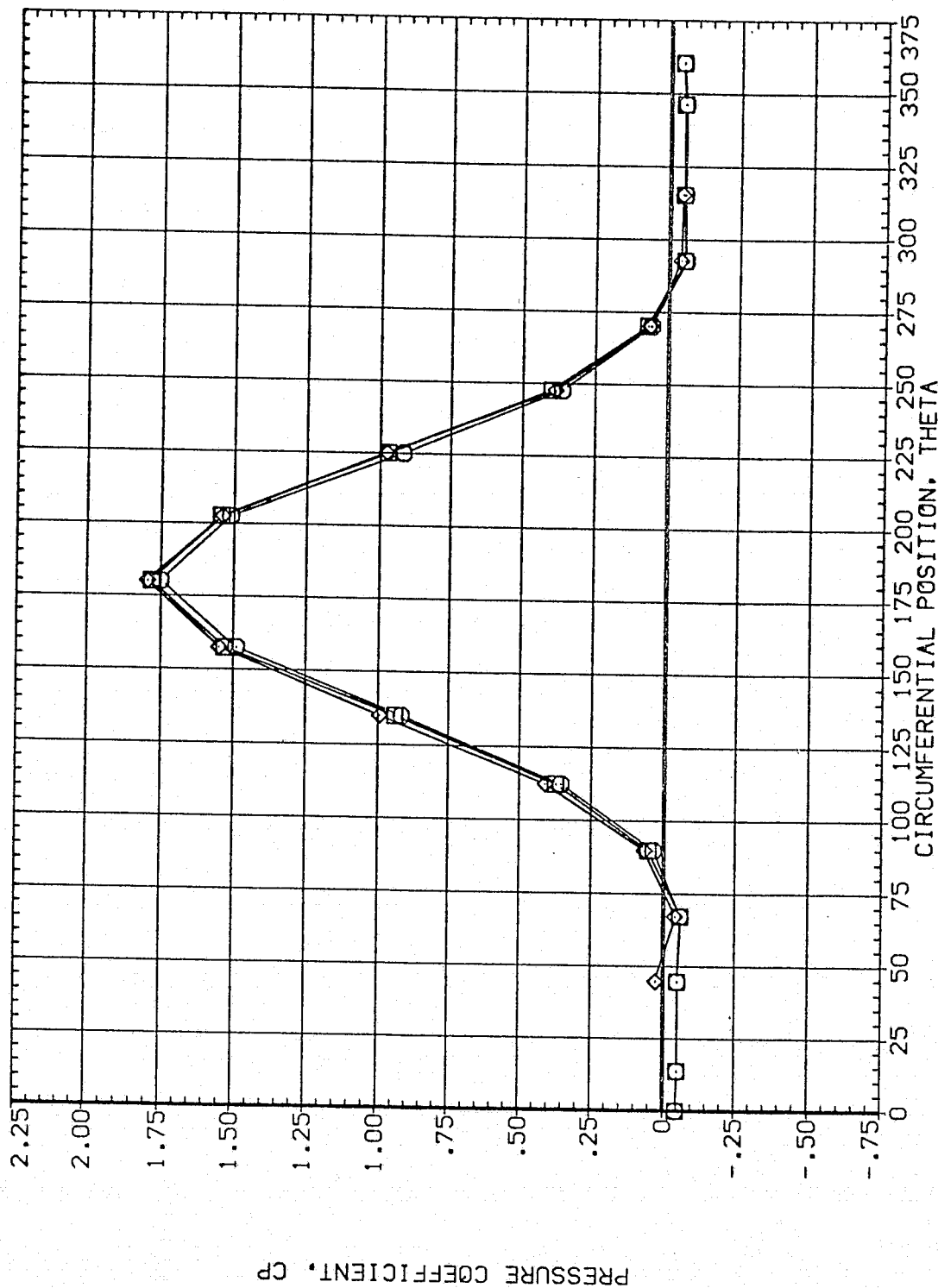


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.610	94.850	3.480	MOUNT	.000	90.000
◇	.735				2.000	.000
◇	.860					

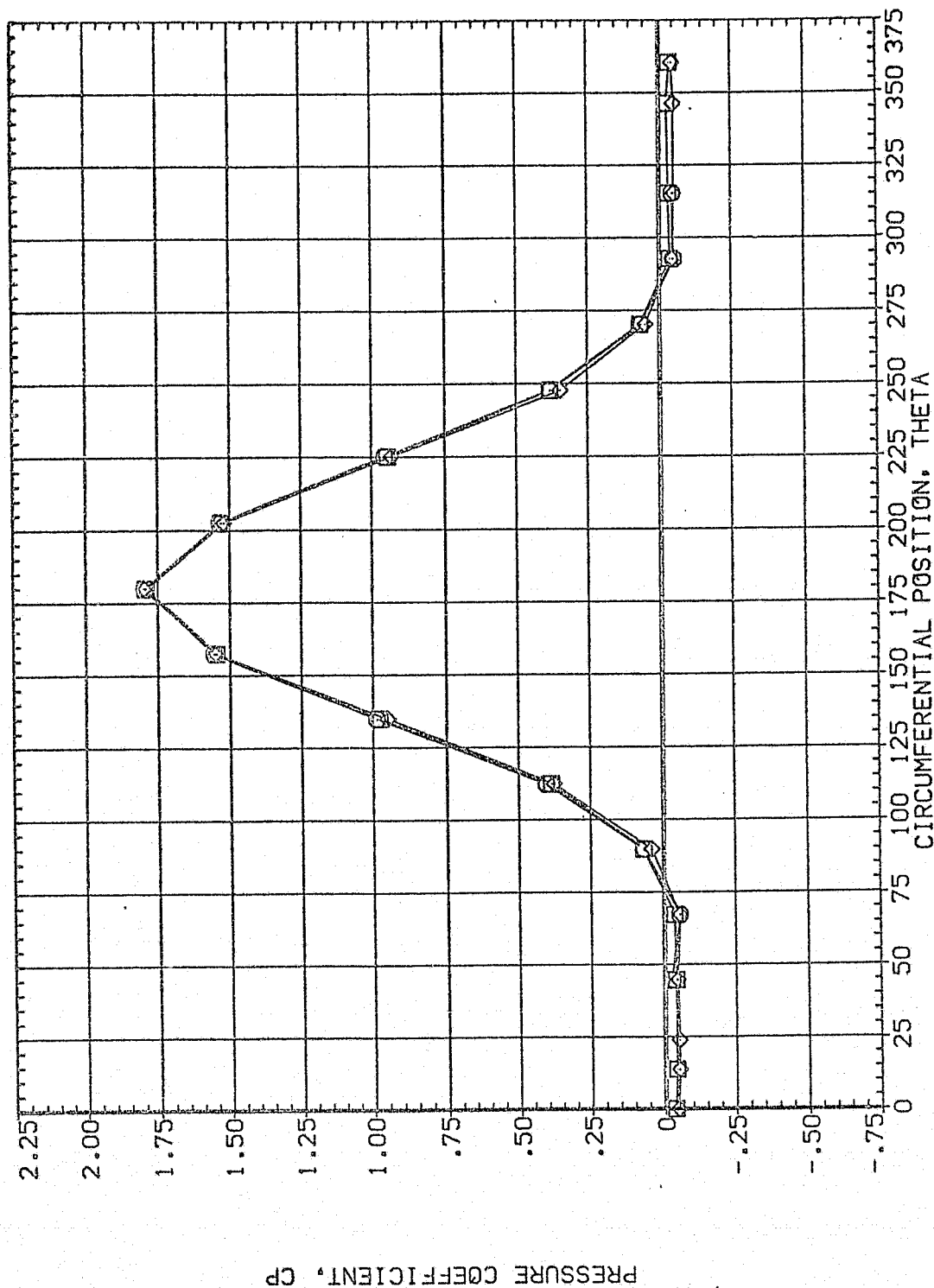


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL X/LB ALPHA MACH
 O .892 94.850 3.480
 □ .923
 ◇ .954

PARAMETRIC VALUES
 BETA .000 OFFSET 90.000
 MOUNT 2.000 PHI .000

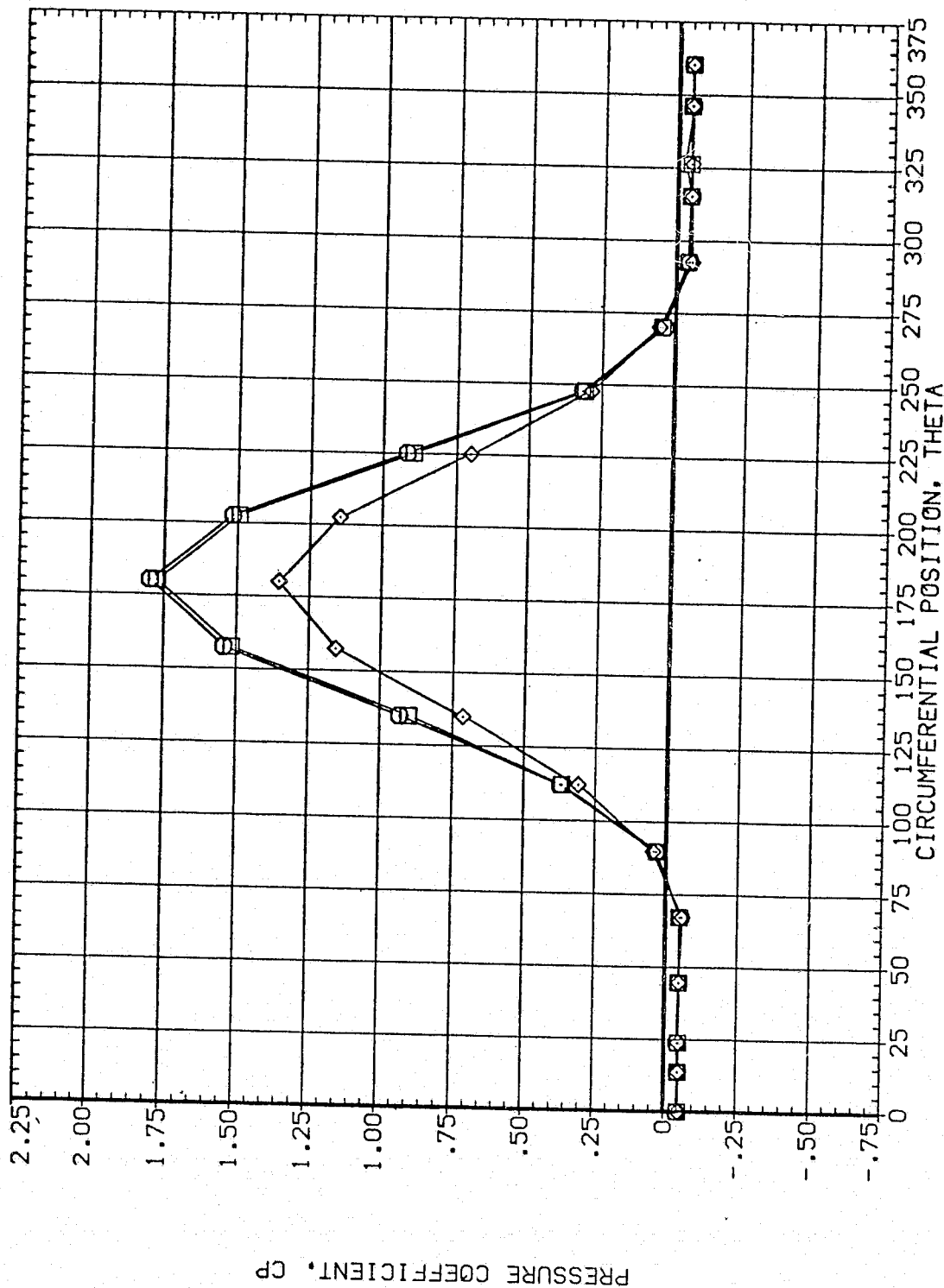


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T2 (P1A079)

SYMBOL	X/LB	ALPHA	NACH	BETA	PARAMETRIC VALUES
○	.055	57.830	3.480	MOUNT	.000
□	.108				OFFSET
◇	.162				PHI
					90.000
					.000

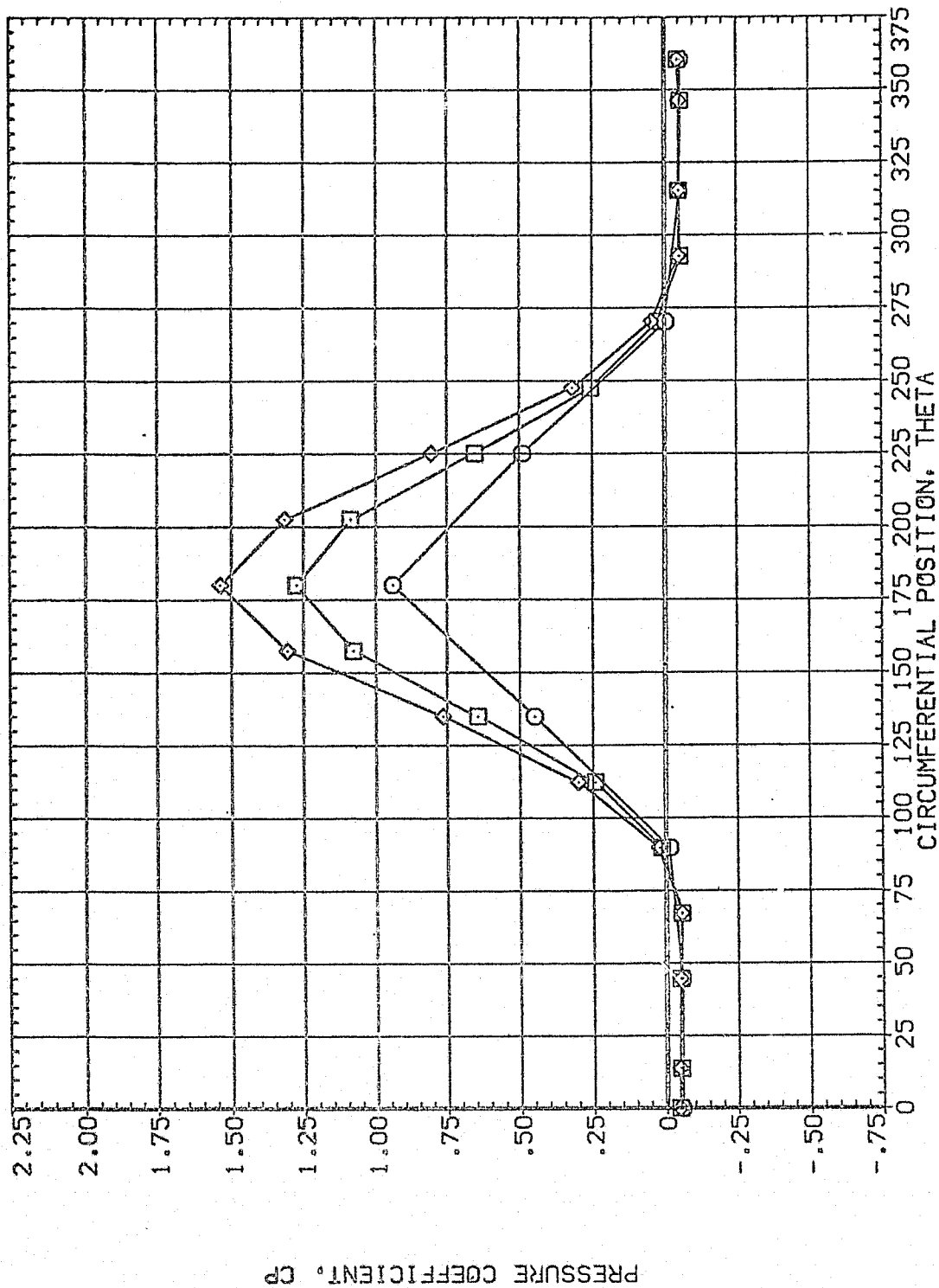


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A079)

SYMBOL
 ○
 □
 ◇

X/LB .216
 ALPHA 97.830
 MACH 3.480
 .322
 .518

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET 90.000
 PHI .000

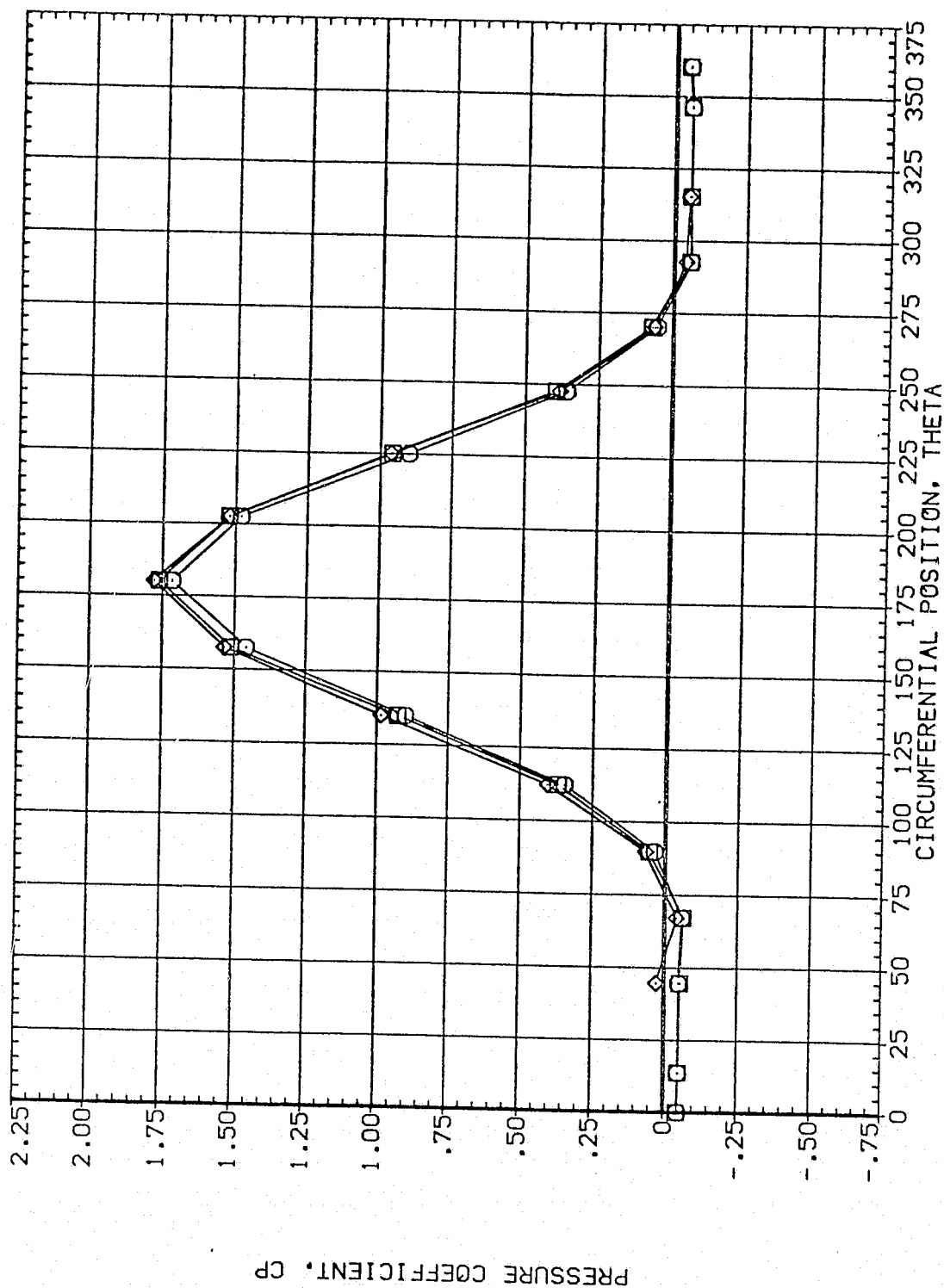


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA MOUNT	.000 OFFSET	90.000 PHI
□	.610	97.830	3.480	2.000		
◇	.735					
◇	.860					

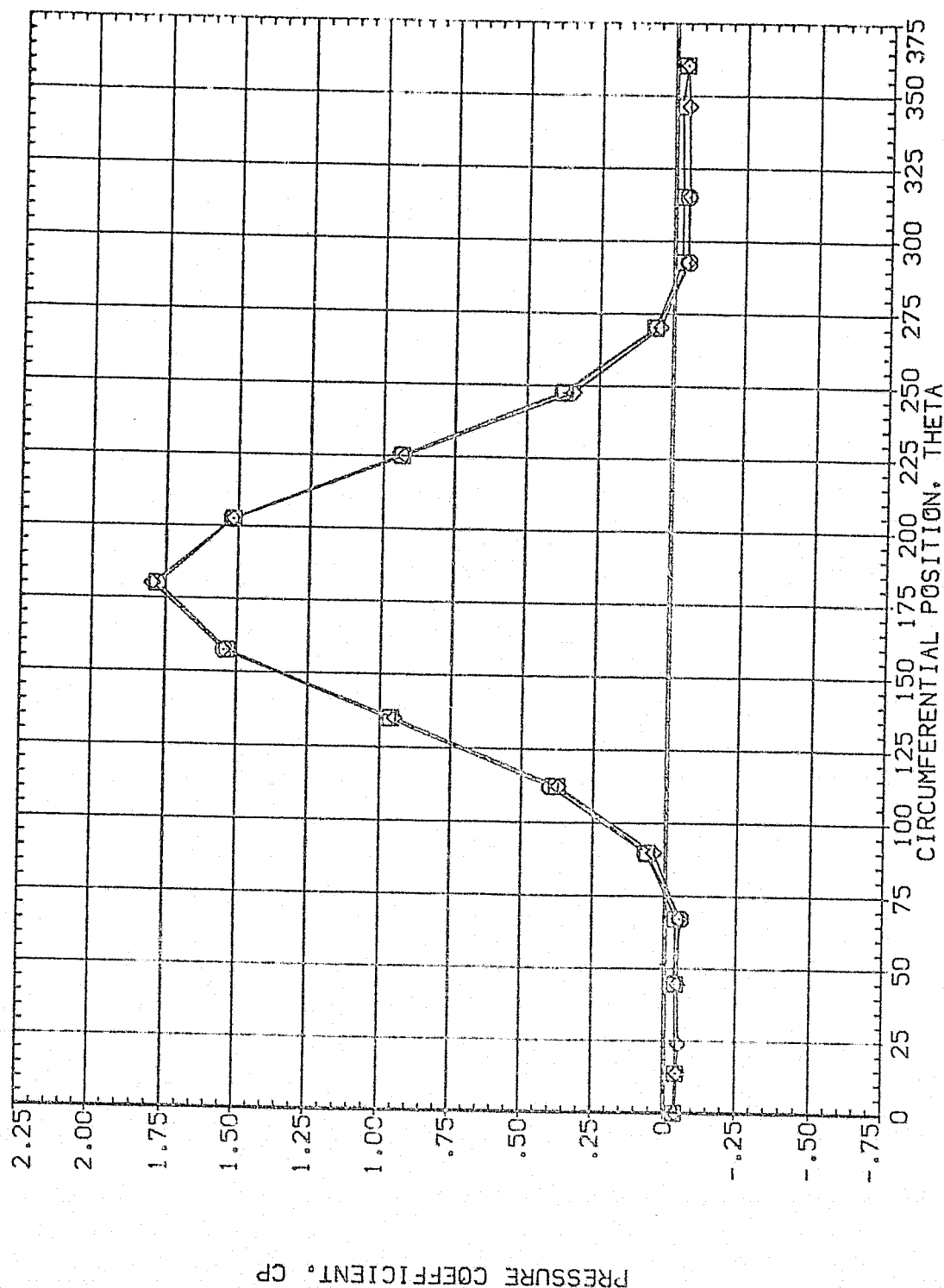


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL X/LB ALPHA MACH
 ○ .892 97.830 3.480
 □ .923
 ◇ .954

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

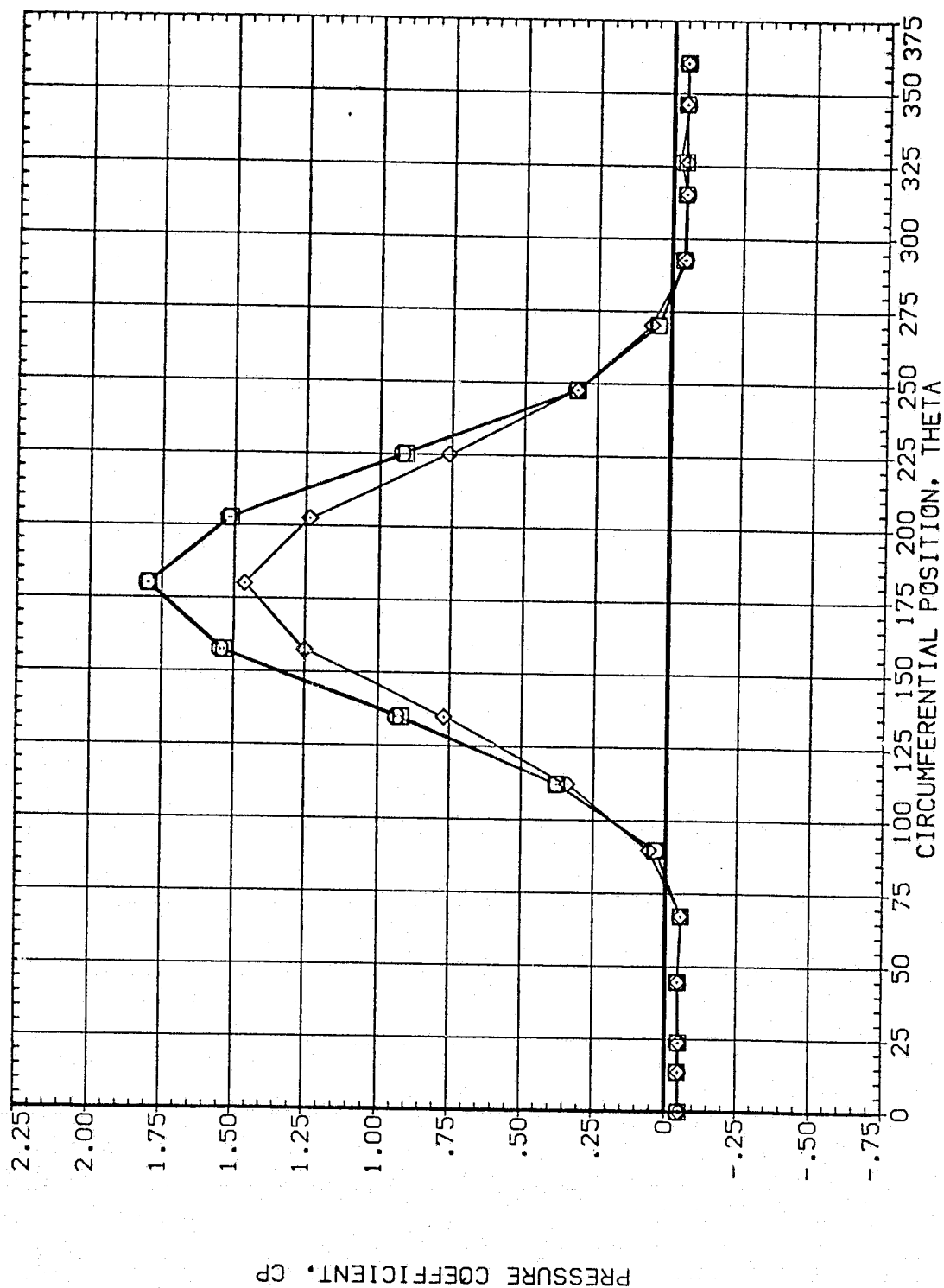


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (7A-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	99.750	3.480	.000	.000	.000
□	.108			2.000		
◇	.162					

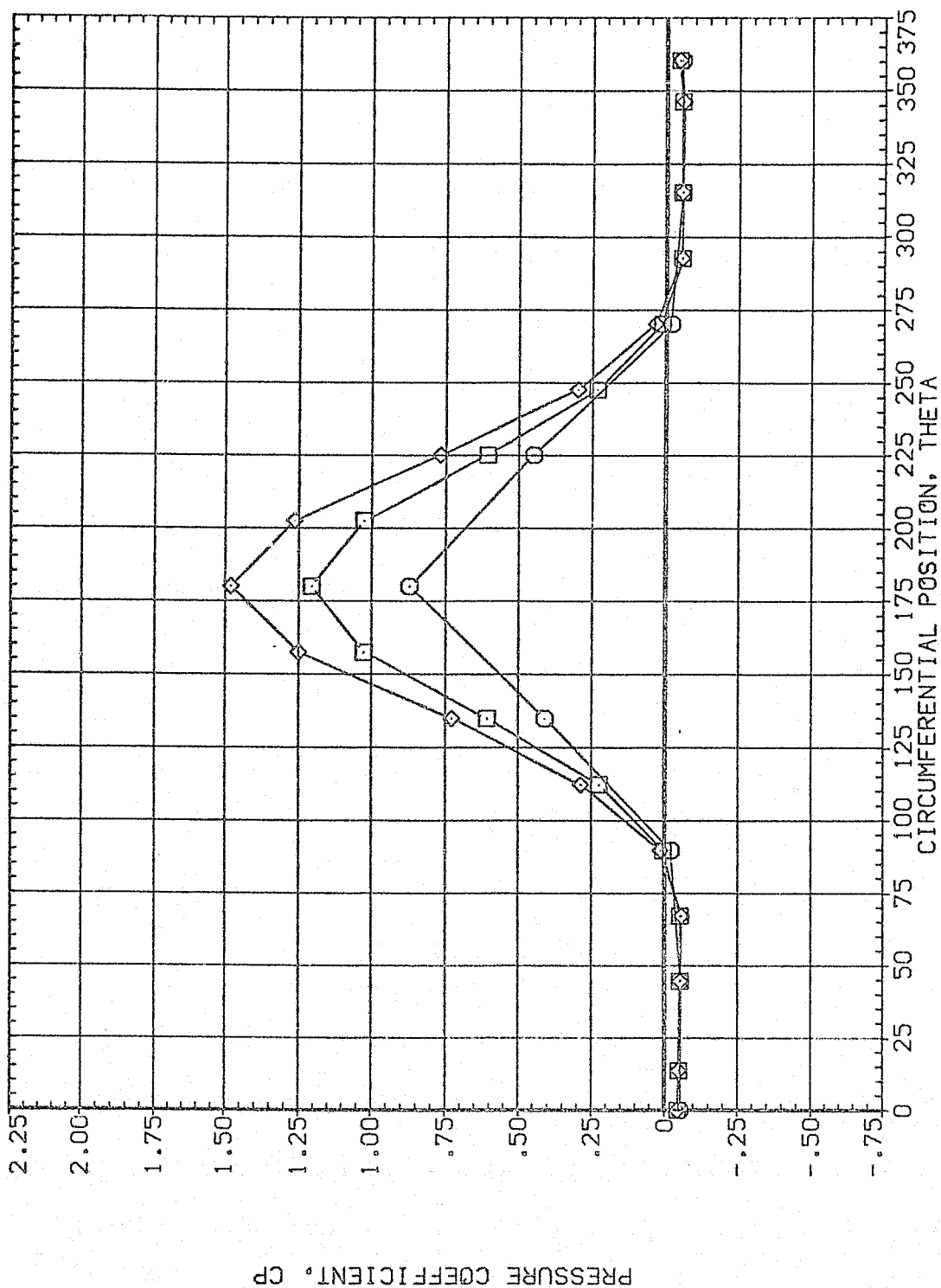


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.216	99.750	3.480	MOUNT	.000	90.000
□	.322				2.000	
◇	.518					.000

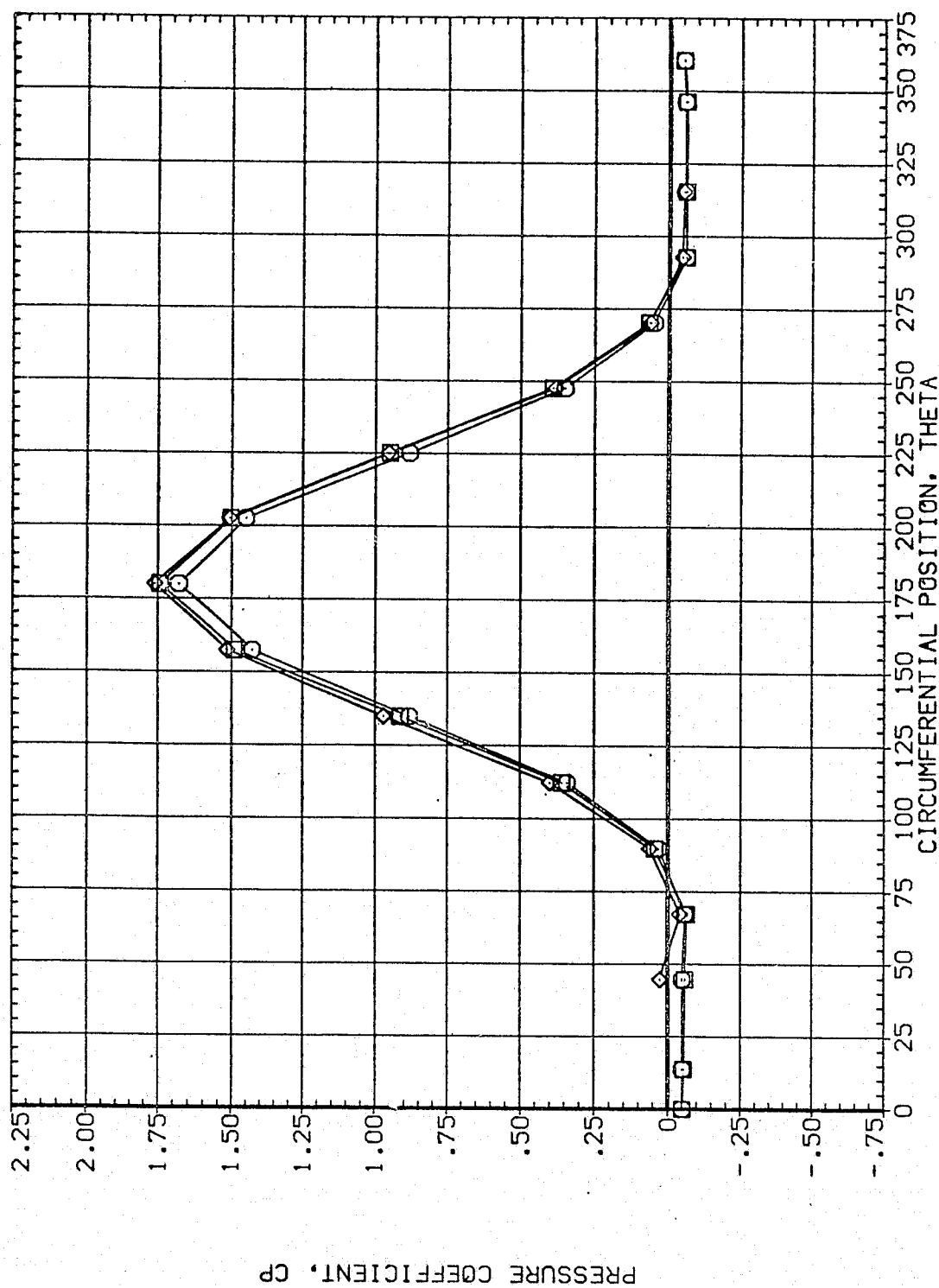


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	.610	99.750	3.480	MOUNT	PHI	.000
□	.735					
◇	.860					

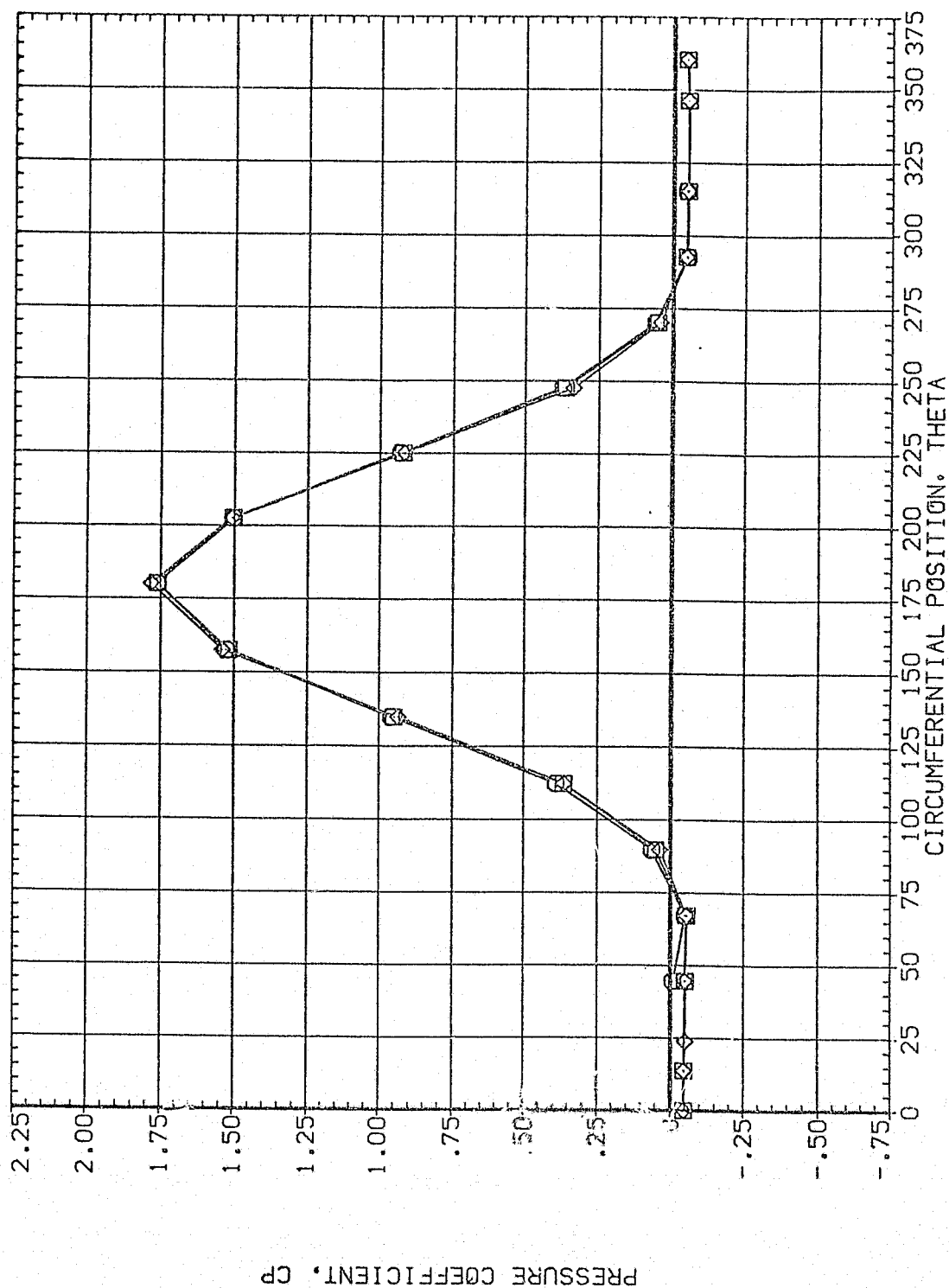


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

(P1A080)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL
◇
□

X/LB .892
.923
.954

ALPHA
99.750

MACH
3.480

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000

OFFSET
PHI
90.000
.000

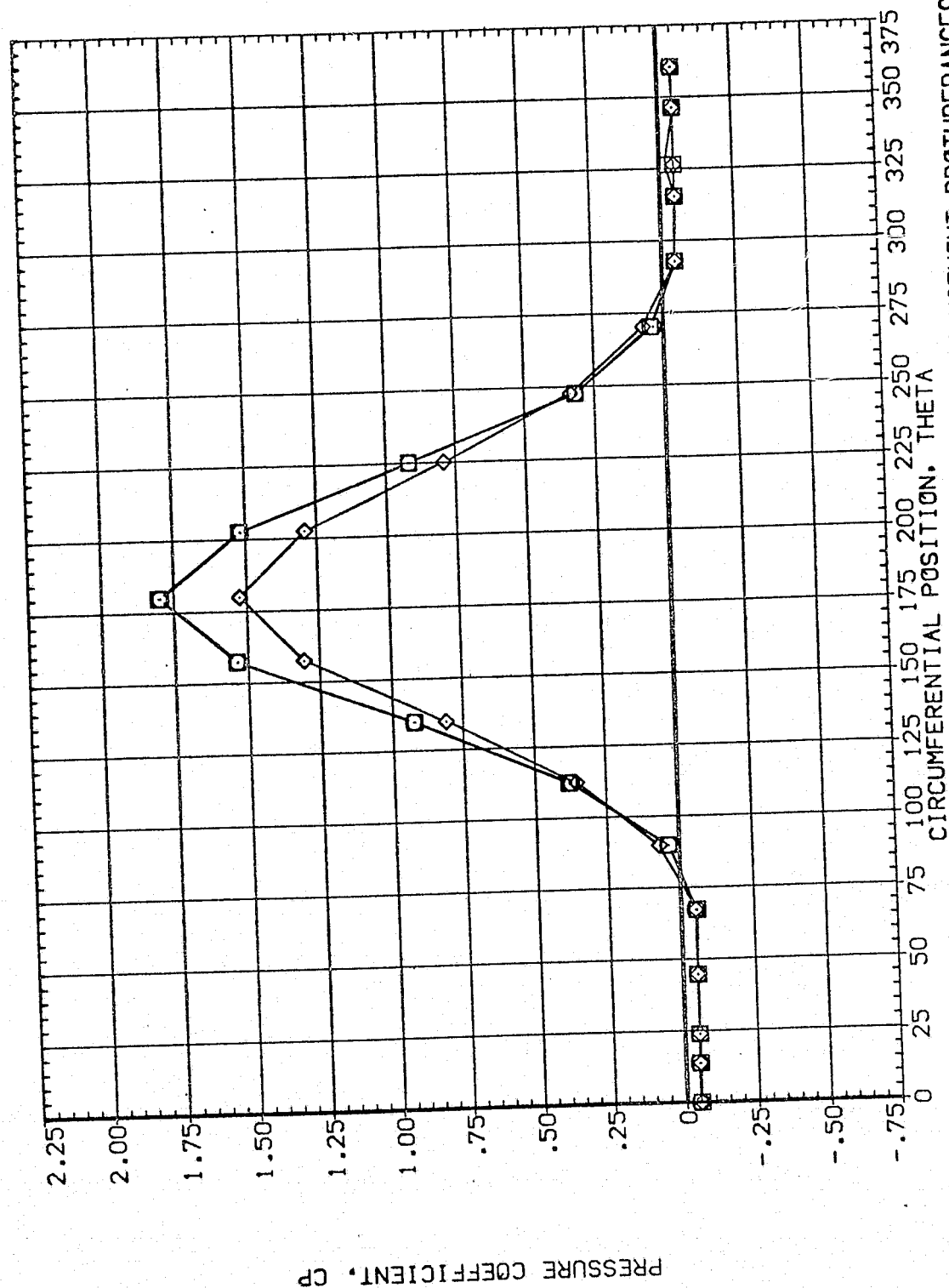


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL
 ○
 □
 ◇

X/LB .055
 ALPHA 51.000
 MACH 4.960

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 60.000
 .000

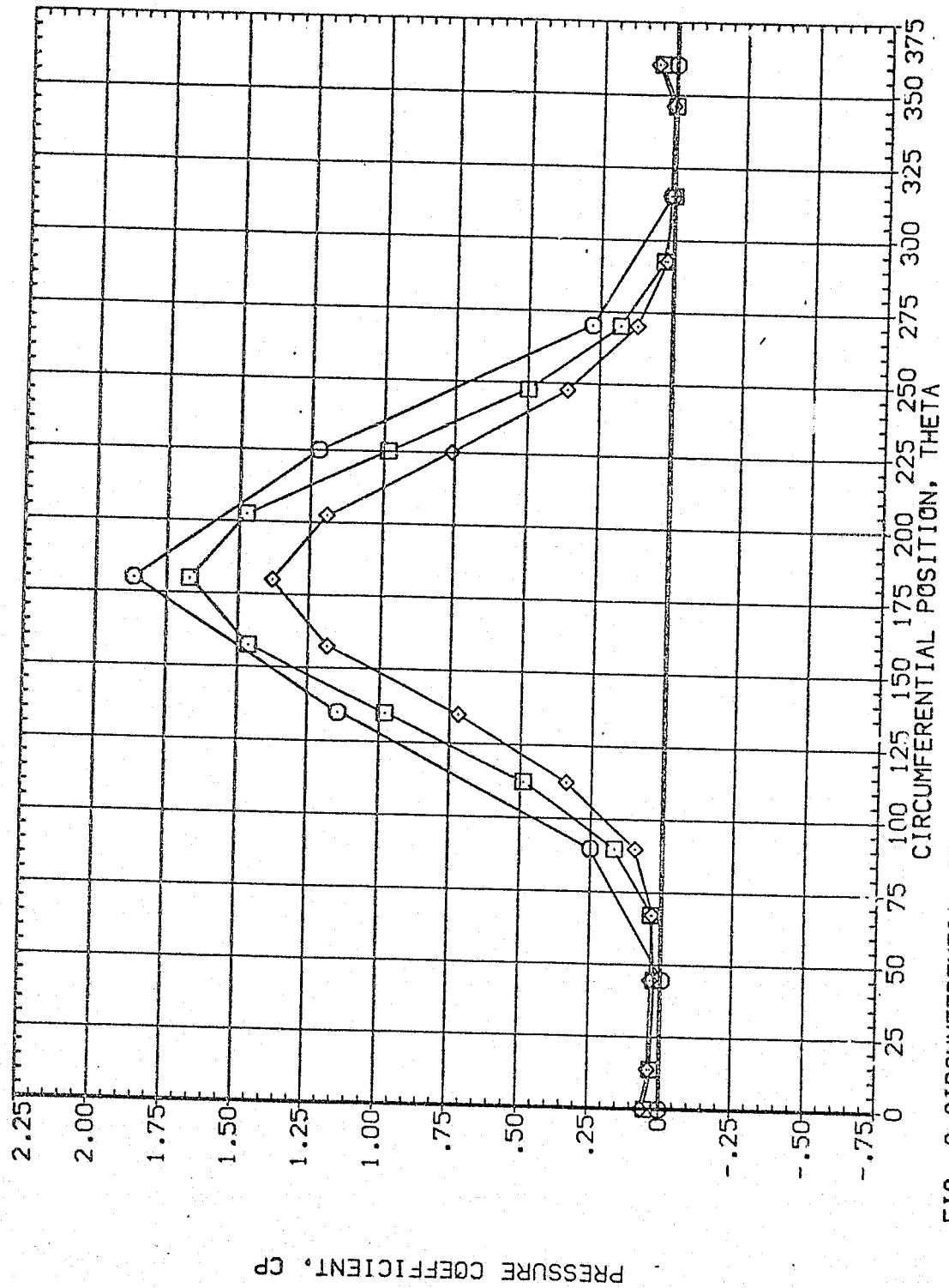


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A061)

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.216	51.000	4.960	MOUNT	.000
□	.322			PHI	2.000
◇	.518				60.000

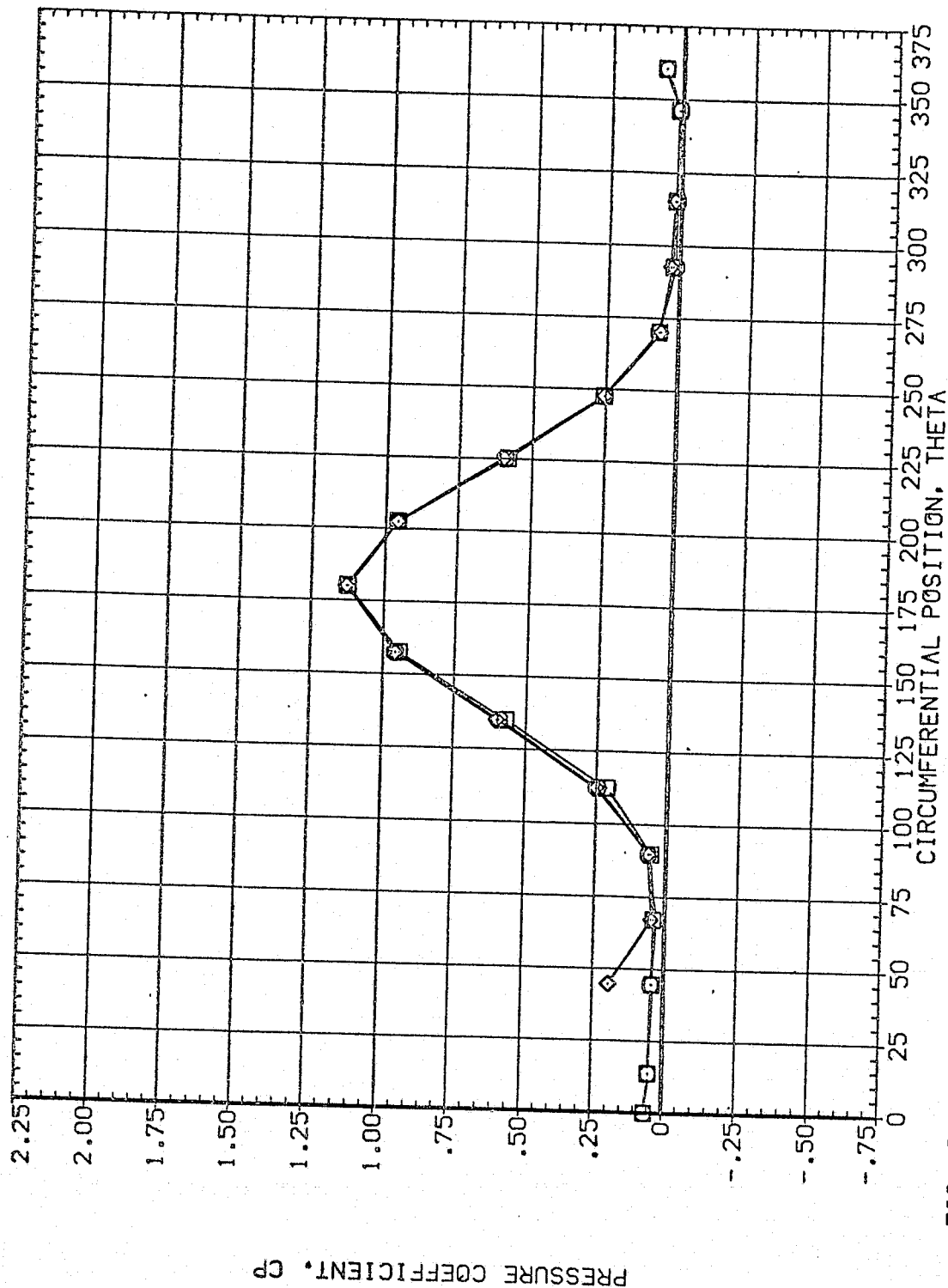


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A061)

SYMBOL
 ○ □ ◇

X/LB
 .610
 .735
 .860

ALPHA
 51.000

MACH
 4.960

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 60.000
 60.000
 PHI

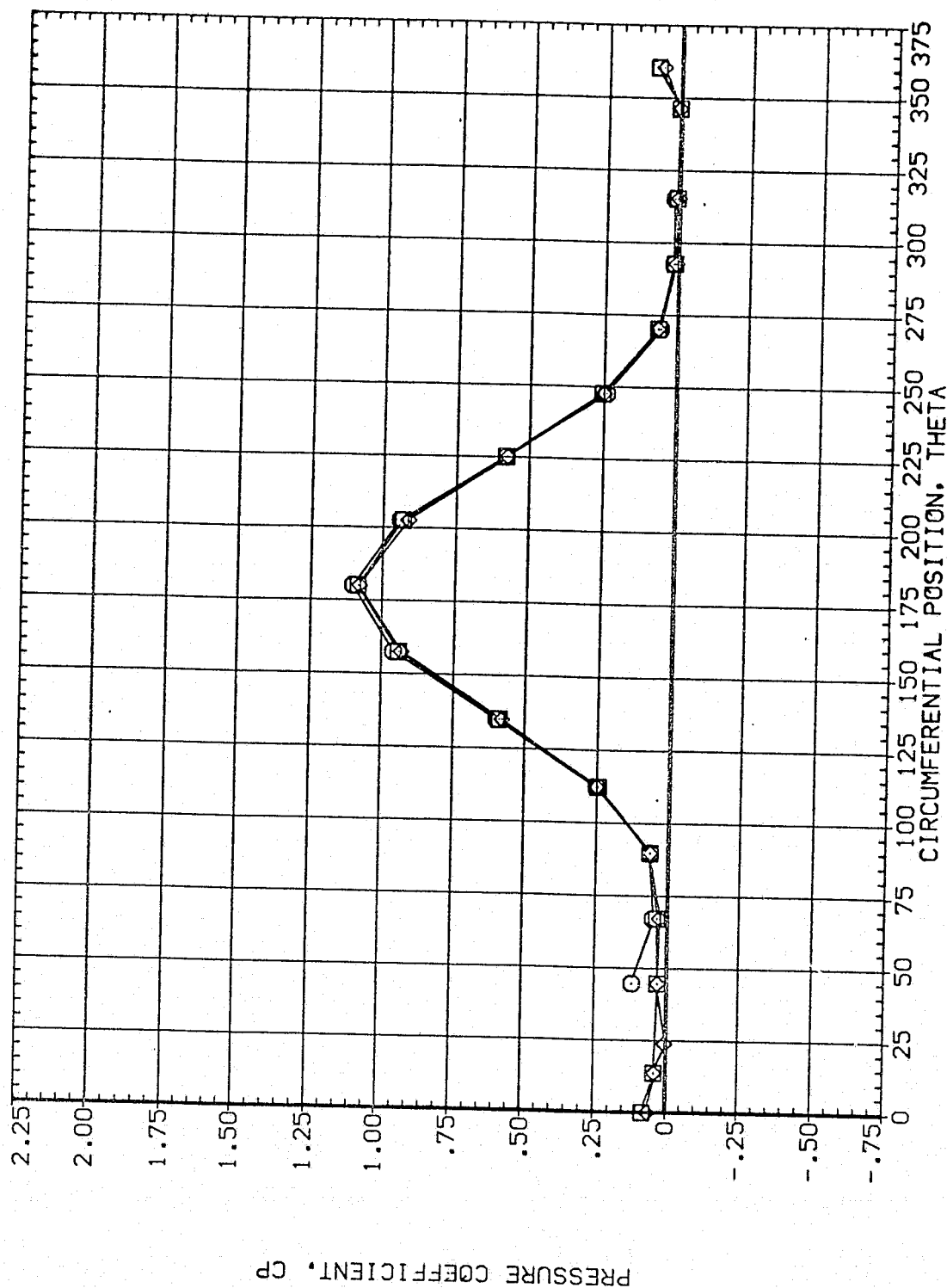


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	.892	51.000	4.960	HUNT	.000 OFFSET
◇	.923				2.000 PHI
	.954				

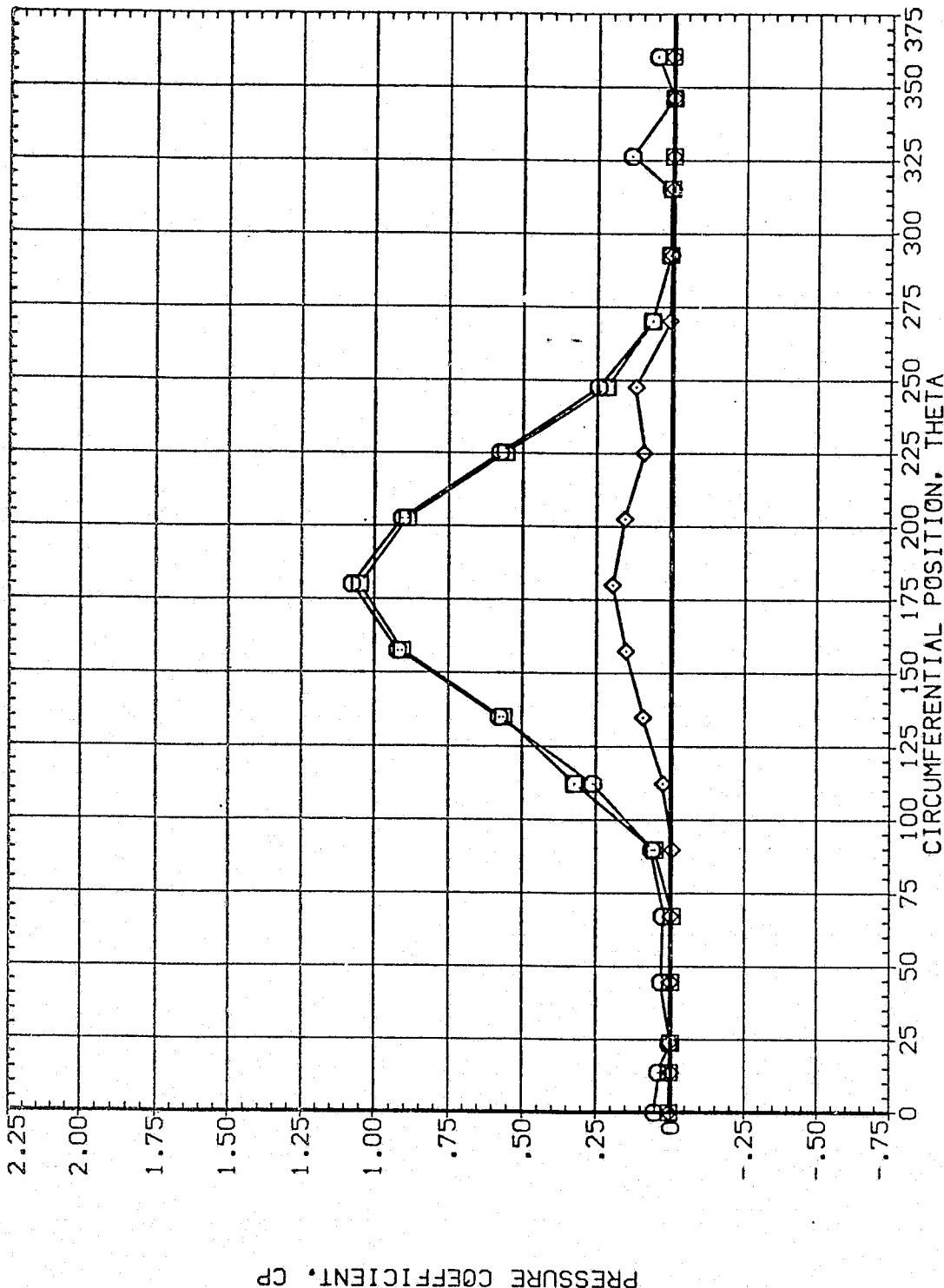


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	54.130	4.960	MOUNT	2.000	60.000
□	.108					.000
◇	.162					

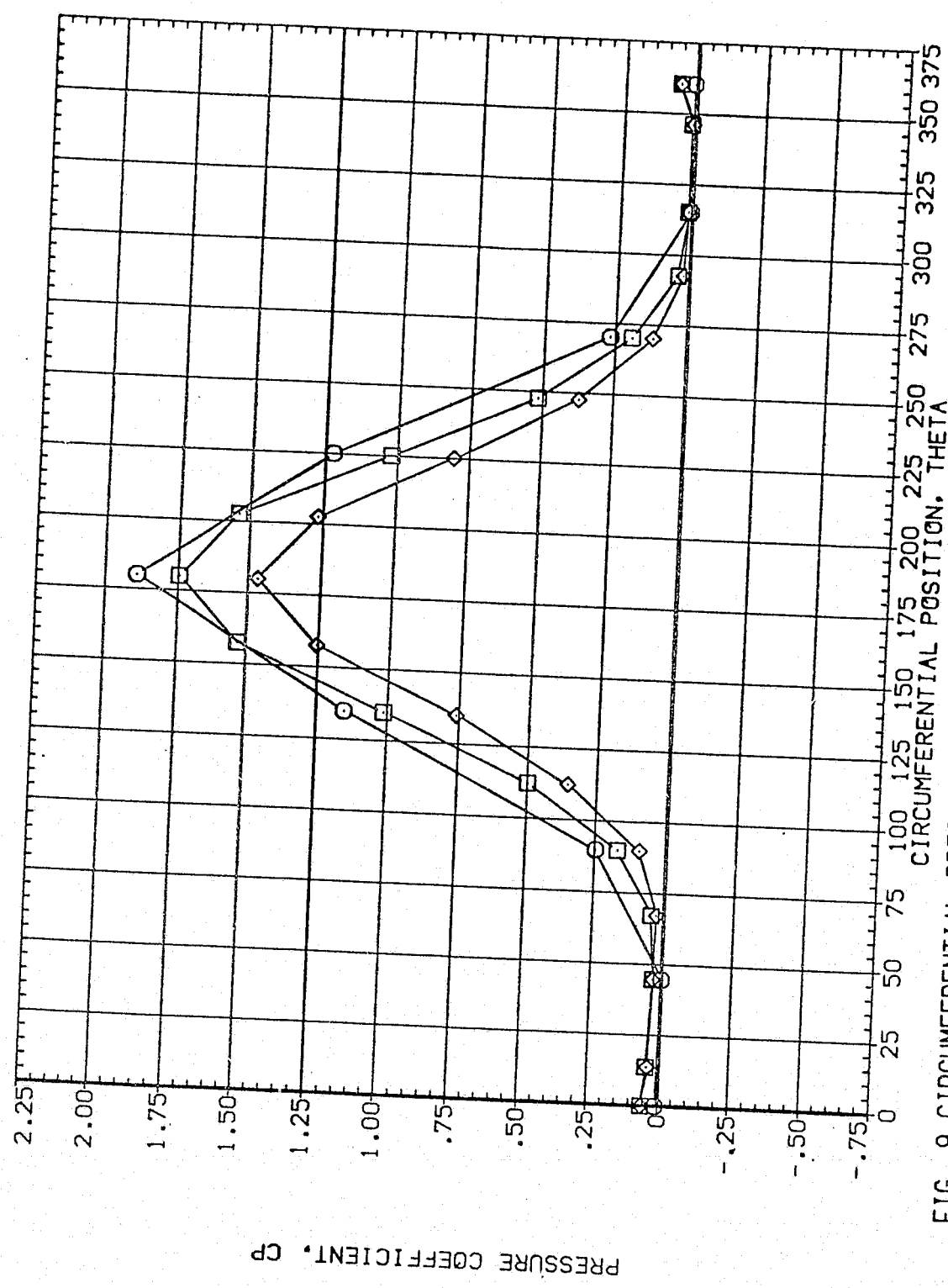


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

PAGE 2605

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A062)

SYMBOL
 □
 ◇

X/LB .216
 .322
 .518

ALPHA 54.130

MACH 4.960

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 60.000
 .000
 OFFSET
 PHI

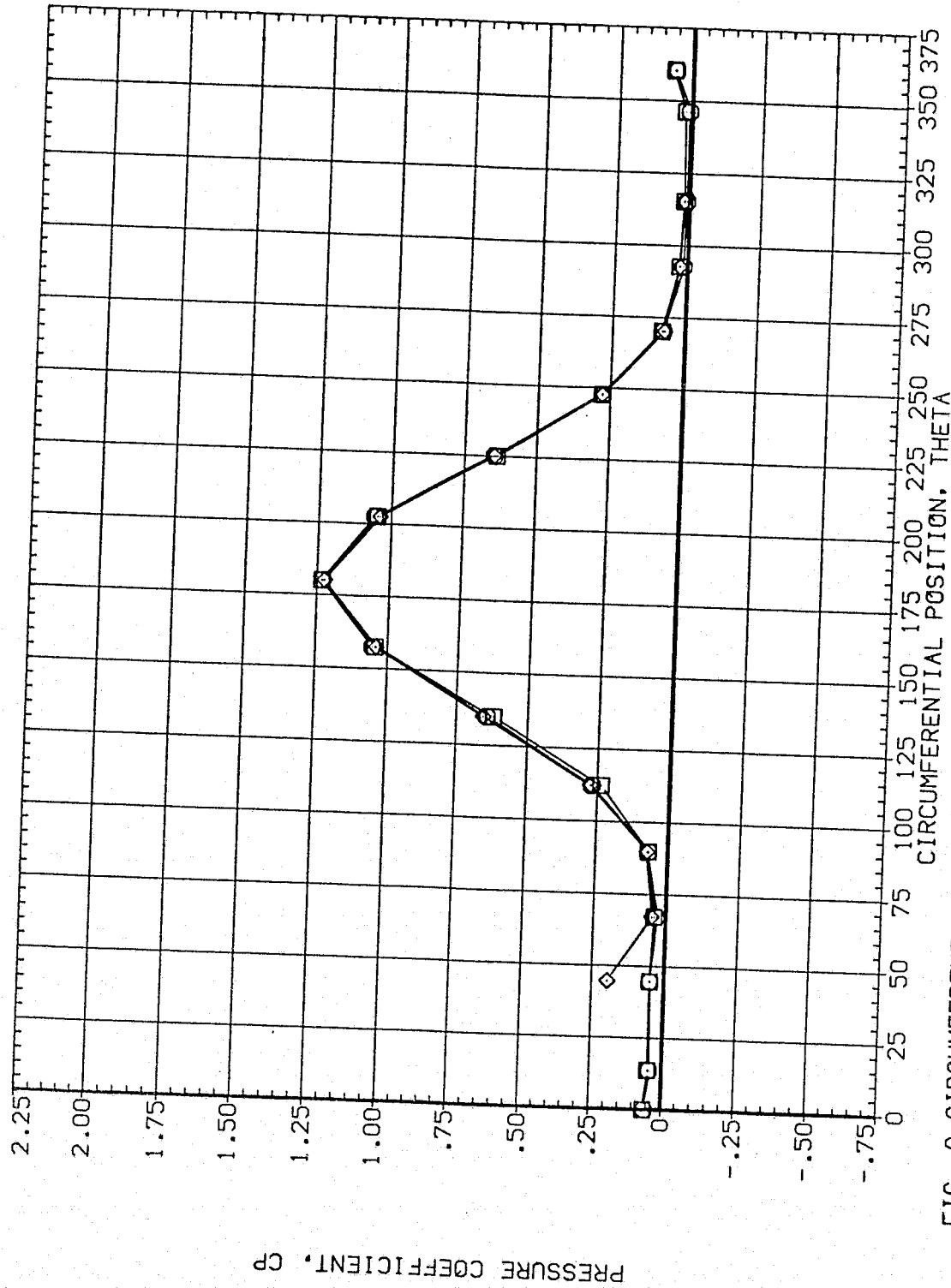


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A062)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	54.130	4.960	.000	.000	.000
□	.735			2.000		
◇	.860					

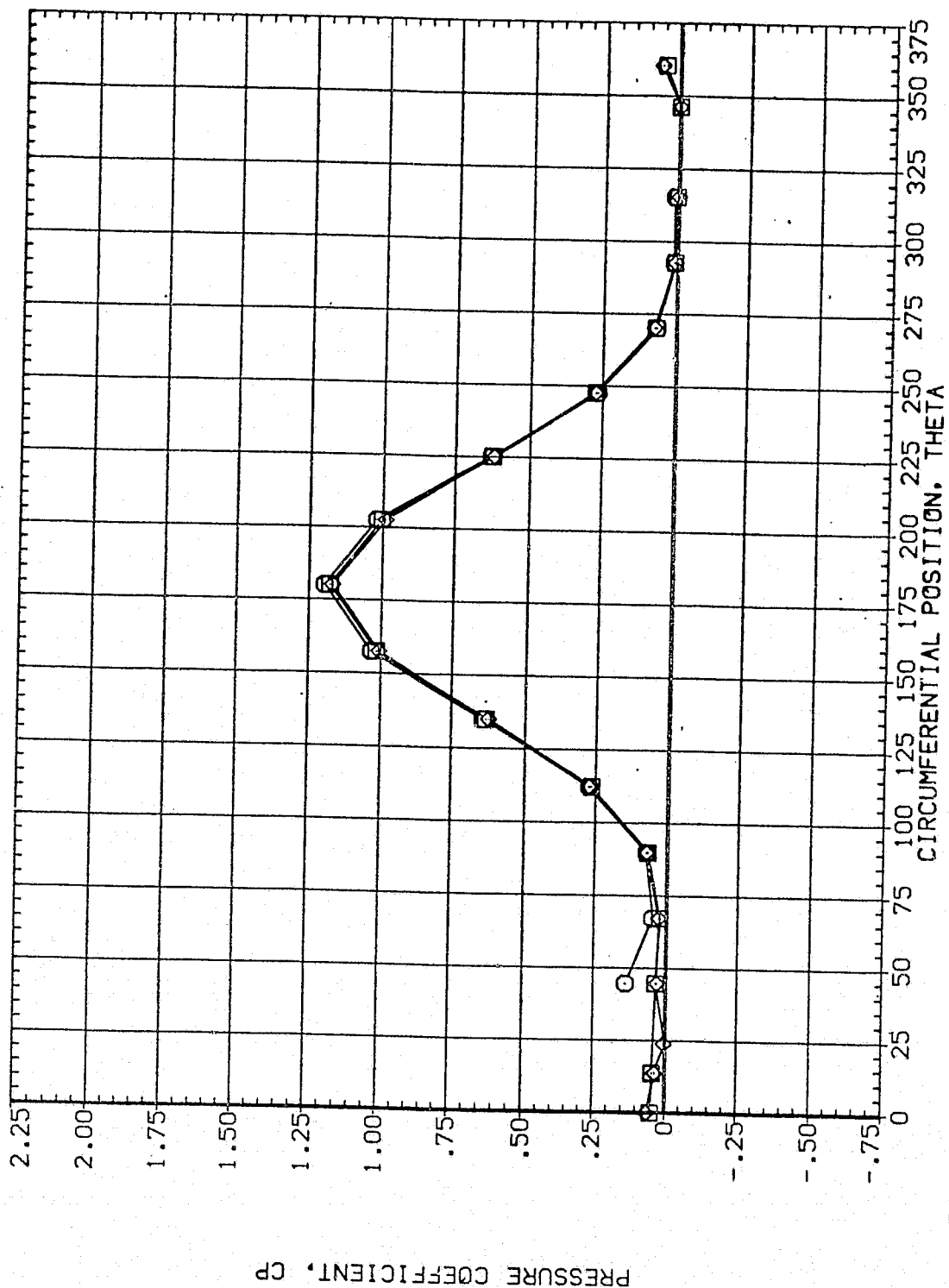


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.892	54.130	4.960	MOUNT	.000 OFFSET
□	.923				2.000 PHI
◇	.954				60.000

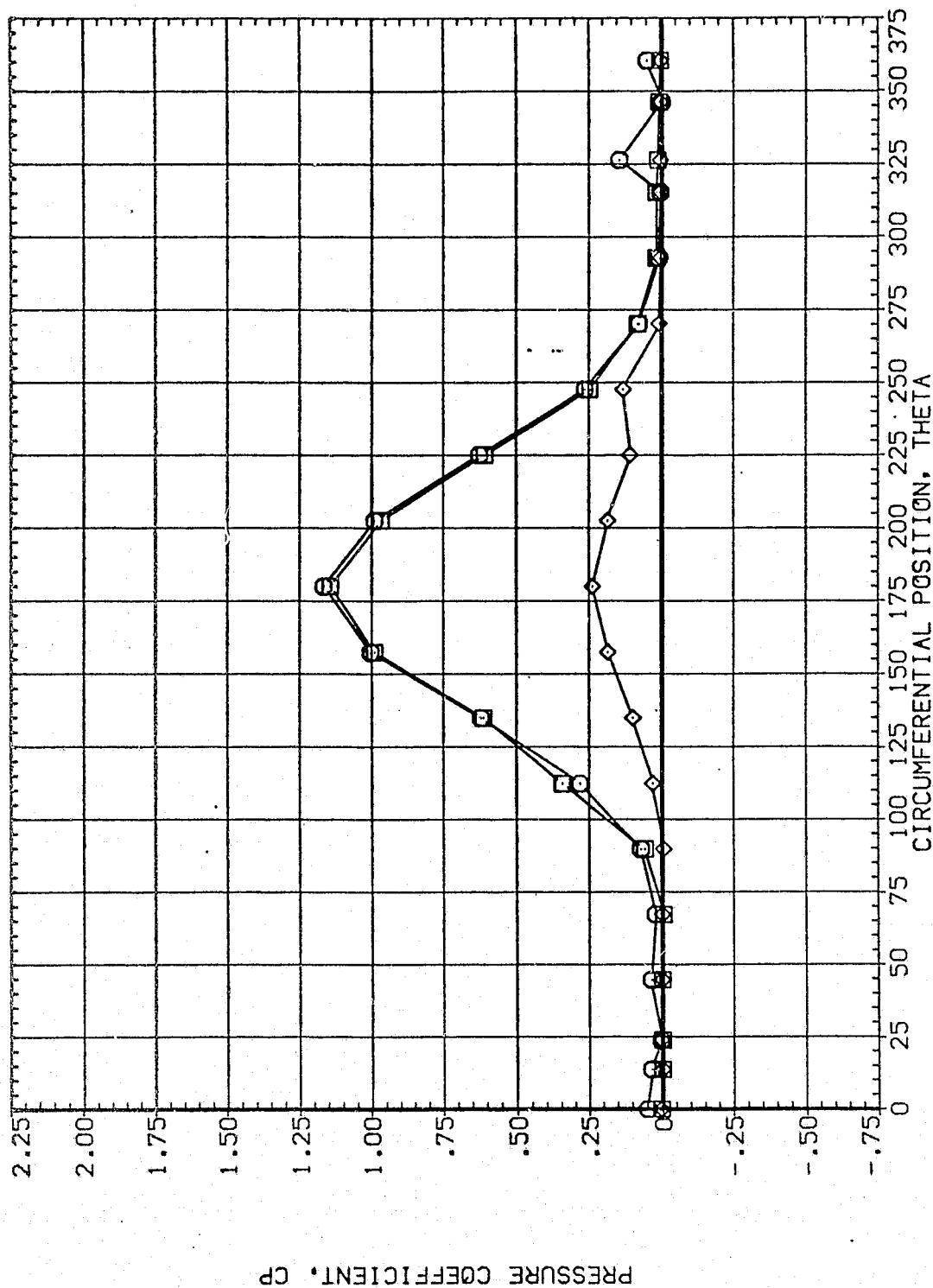


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	57.130	4.960	.000	.000	.000
□	.108			2.000		
◇	.162					

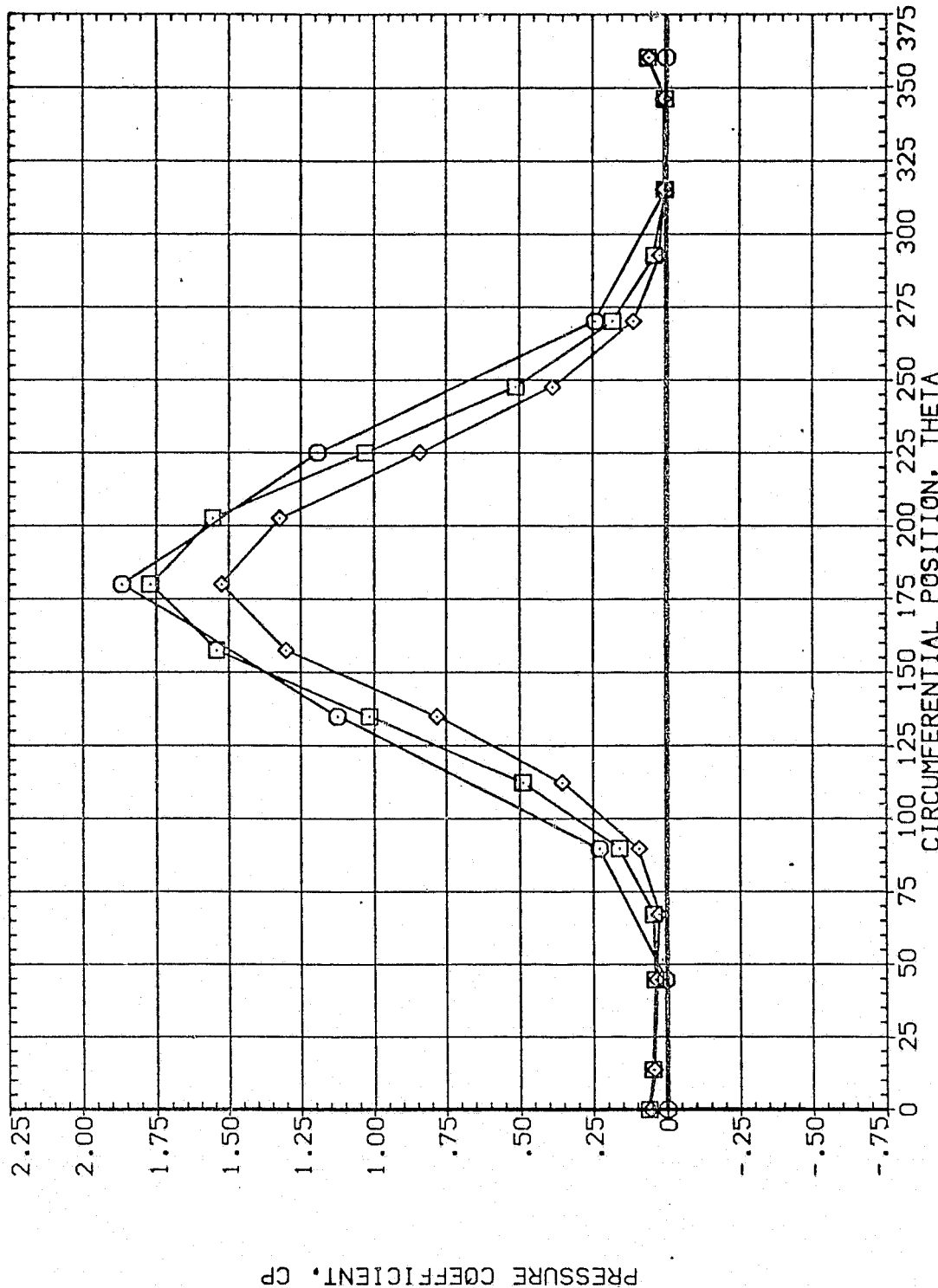


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

(PIA063)

PARAHETRIC VALUES	
.000	OFFSET
2.000	PHI
60.000	
.000	

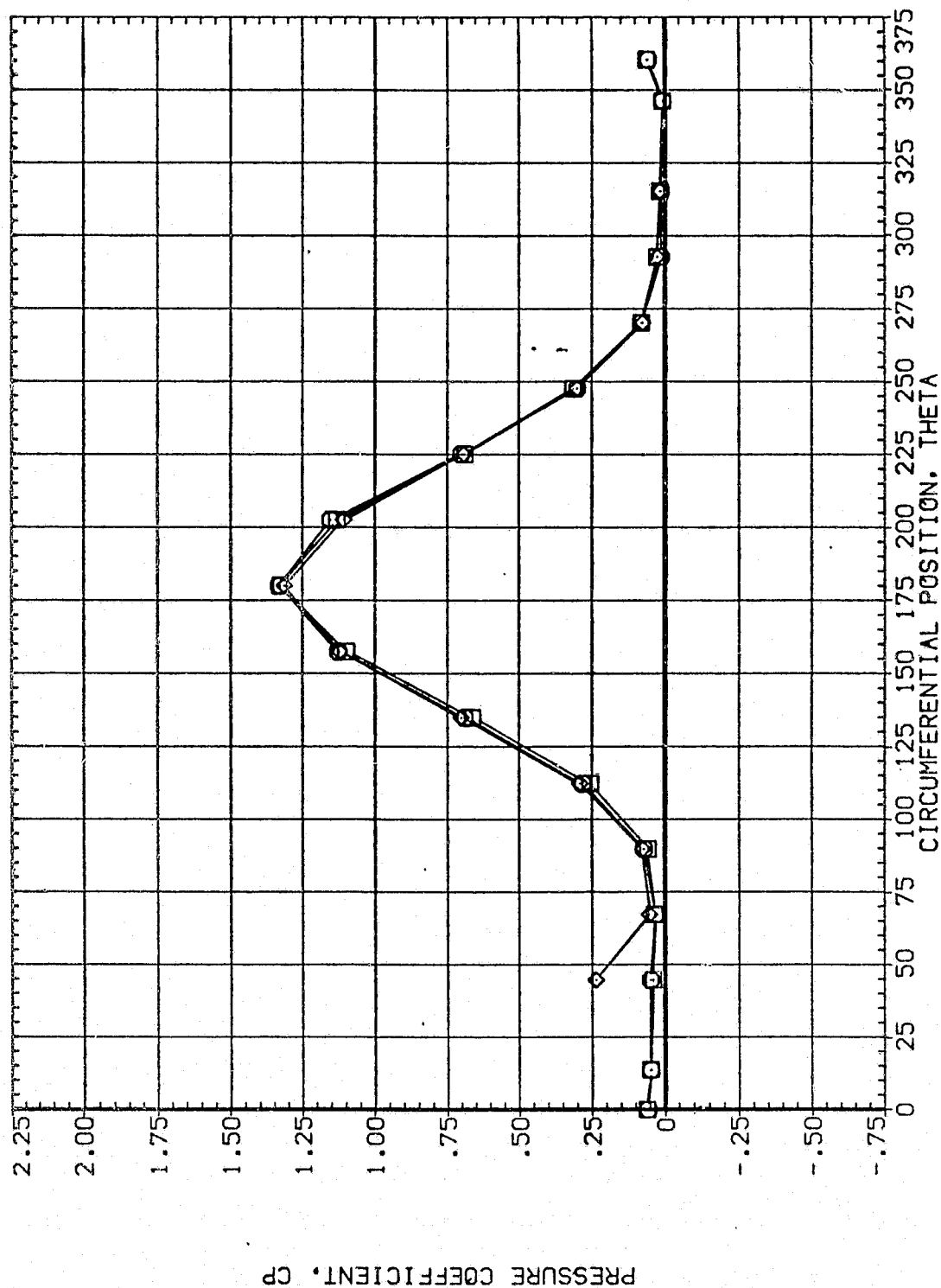


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A063)

SYMBOL X/LB ALPHA MACH
 ○ .610
 □ .735
 ◇ .860

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 60.000
 .000

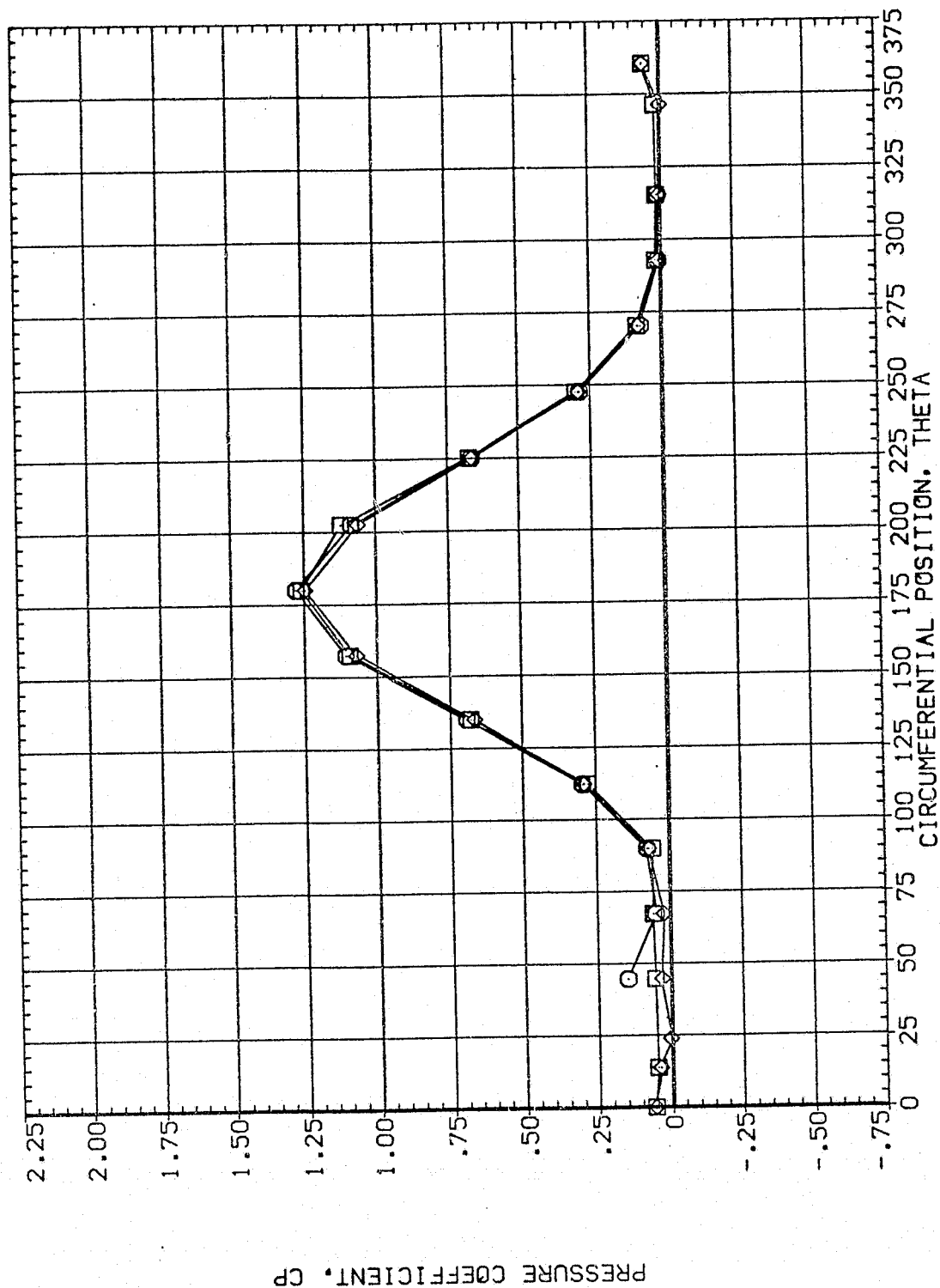


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2611

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A063)

SYMBOL

X/LB ALPHA MACH
.032 57.130 4.560
.923
.954

BETA
MOUNT
PARAMETRIC VALUES
.000
2.000
OFFSET
PHI
60.000
.000

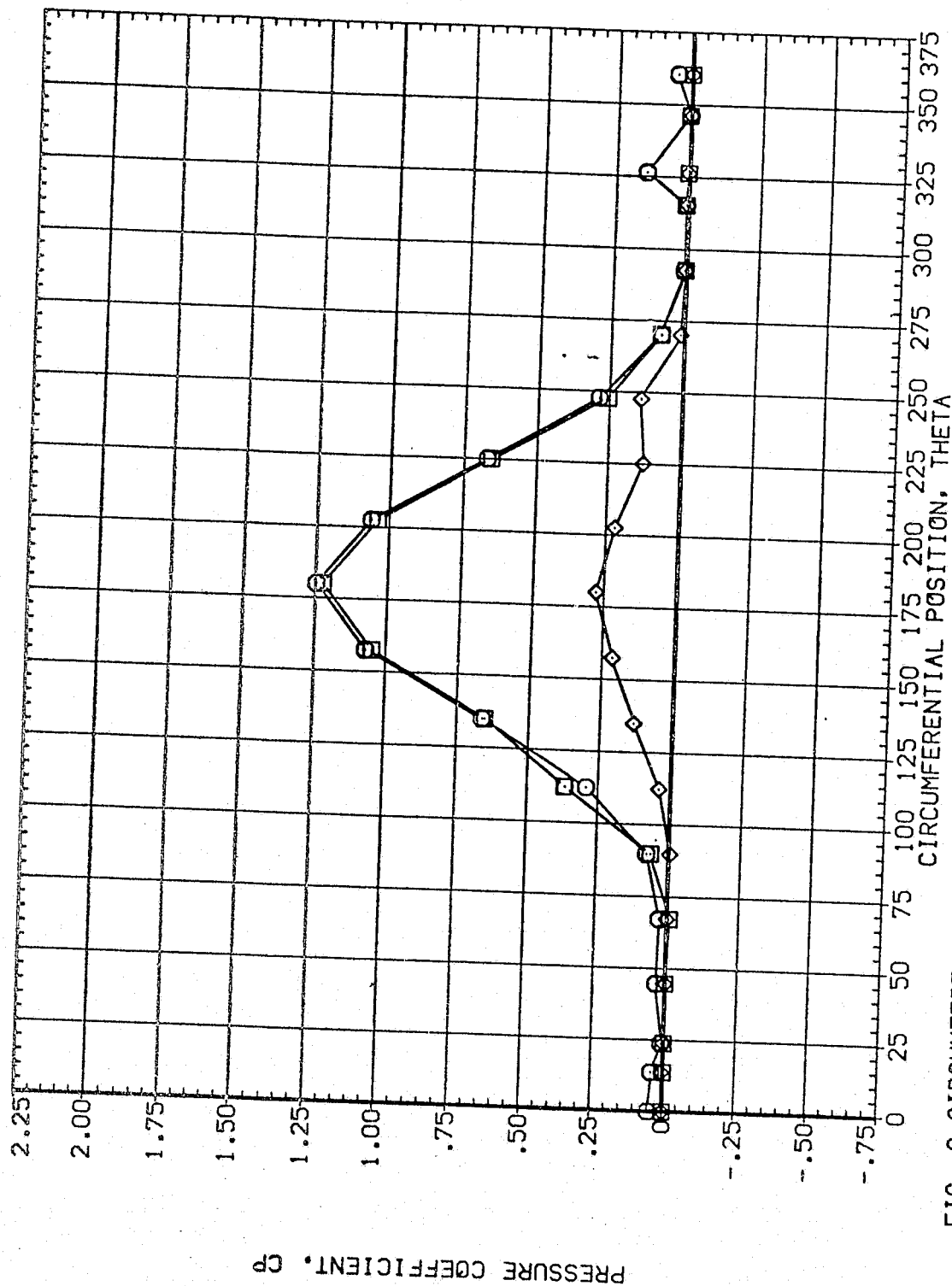


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2612

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A064)

SYMBOL

X/LB
.055
.109
.162

ALPHA
60.130

MACH
4.960

PARAMETRIC VALUES

BETA
HIGHT

.000
2.000

OFFSET
PHI

60.000
.000

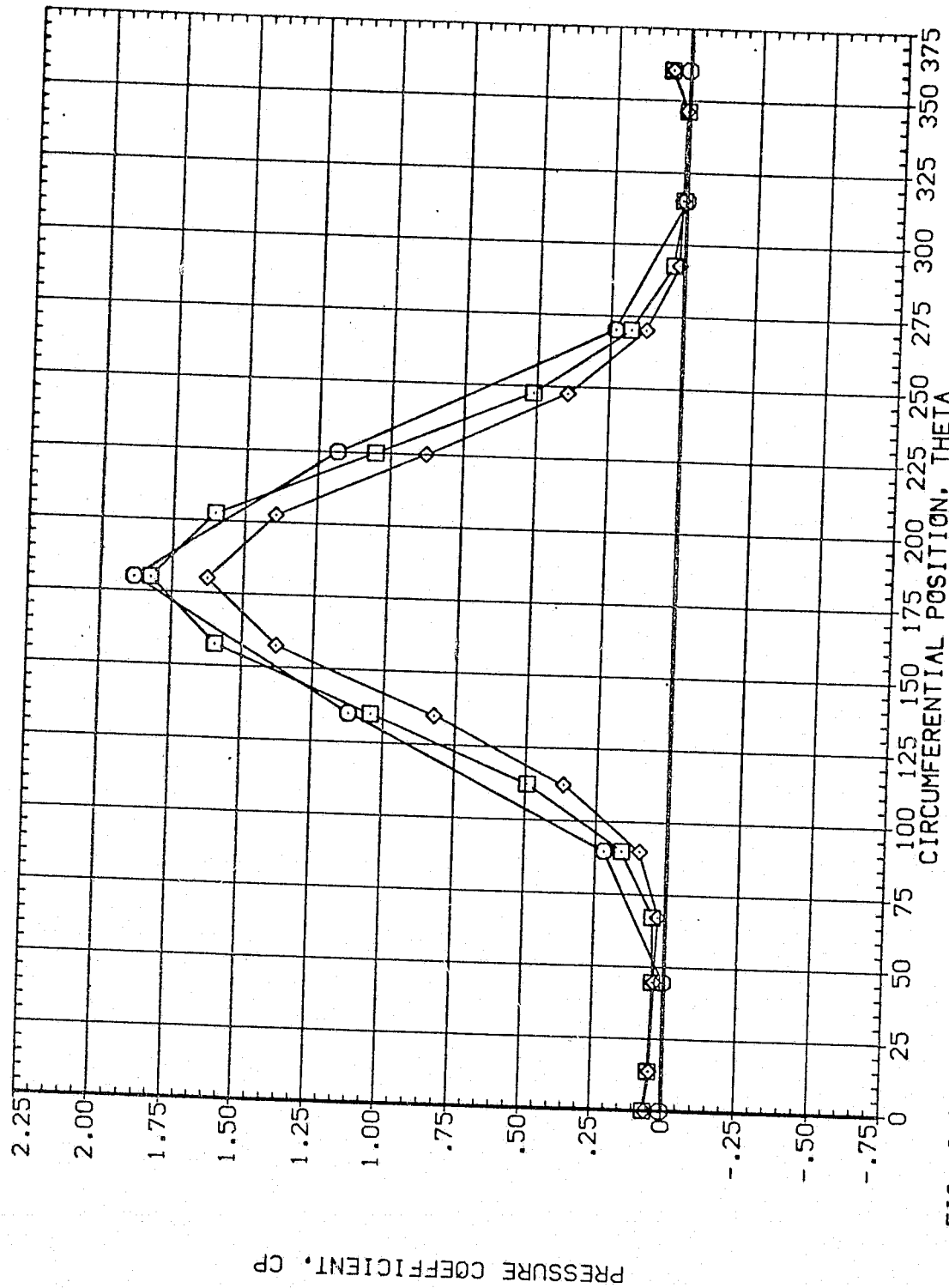


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL
□
◇

X/LB
.216
.322
.518

ALPHA
60.130

MACH
4.960

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
OFFSET
PHI

50.000
.000

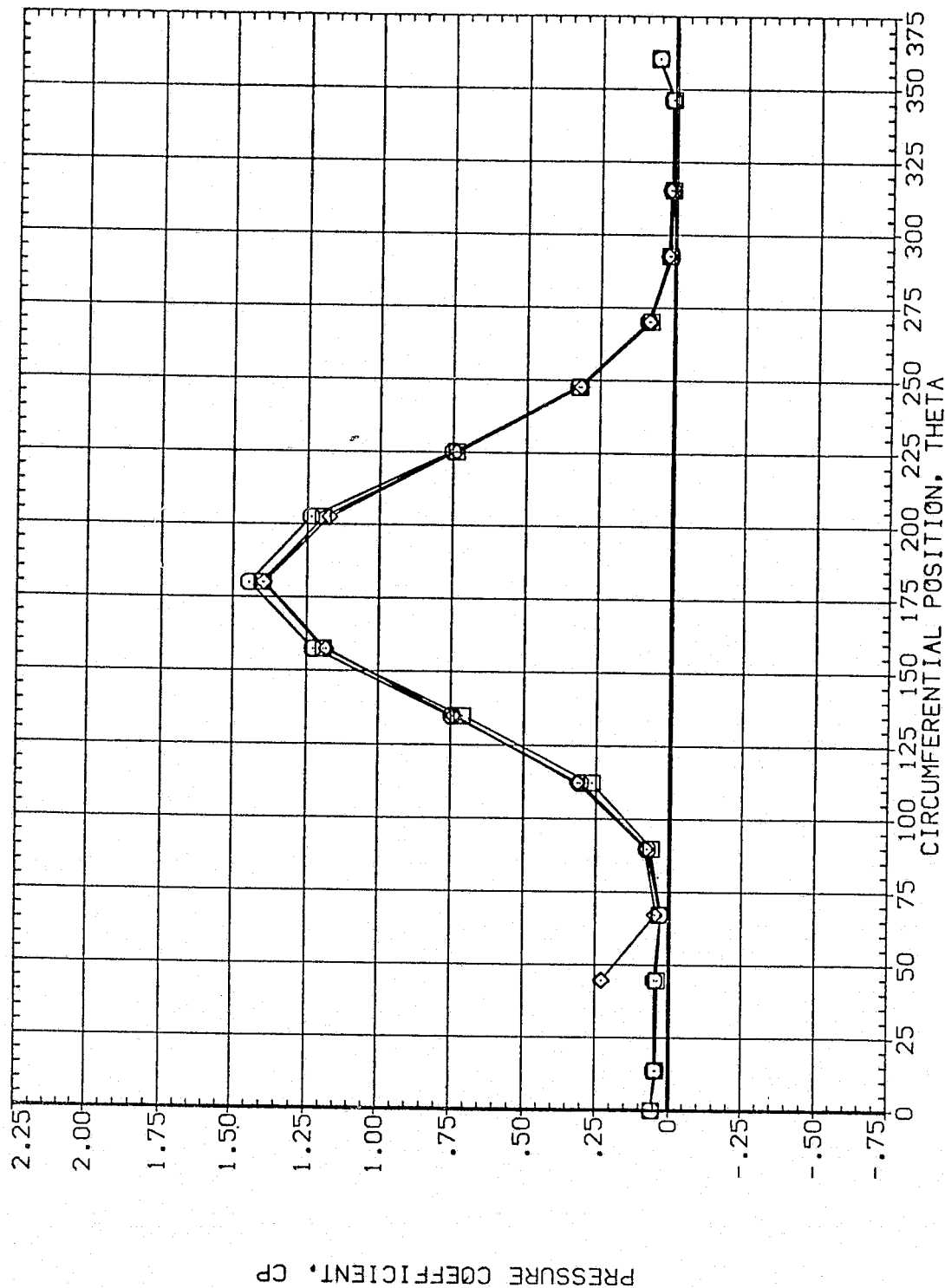


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	60.130	4.960	HOUNT	.000	60.000
□	.735				2.000	.000
◇	.860					

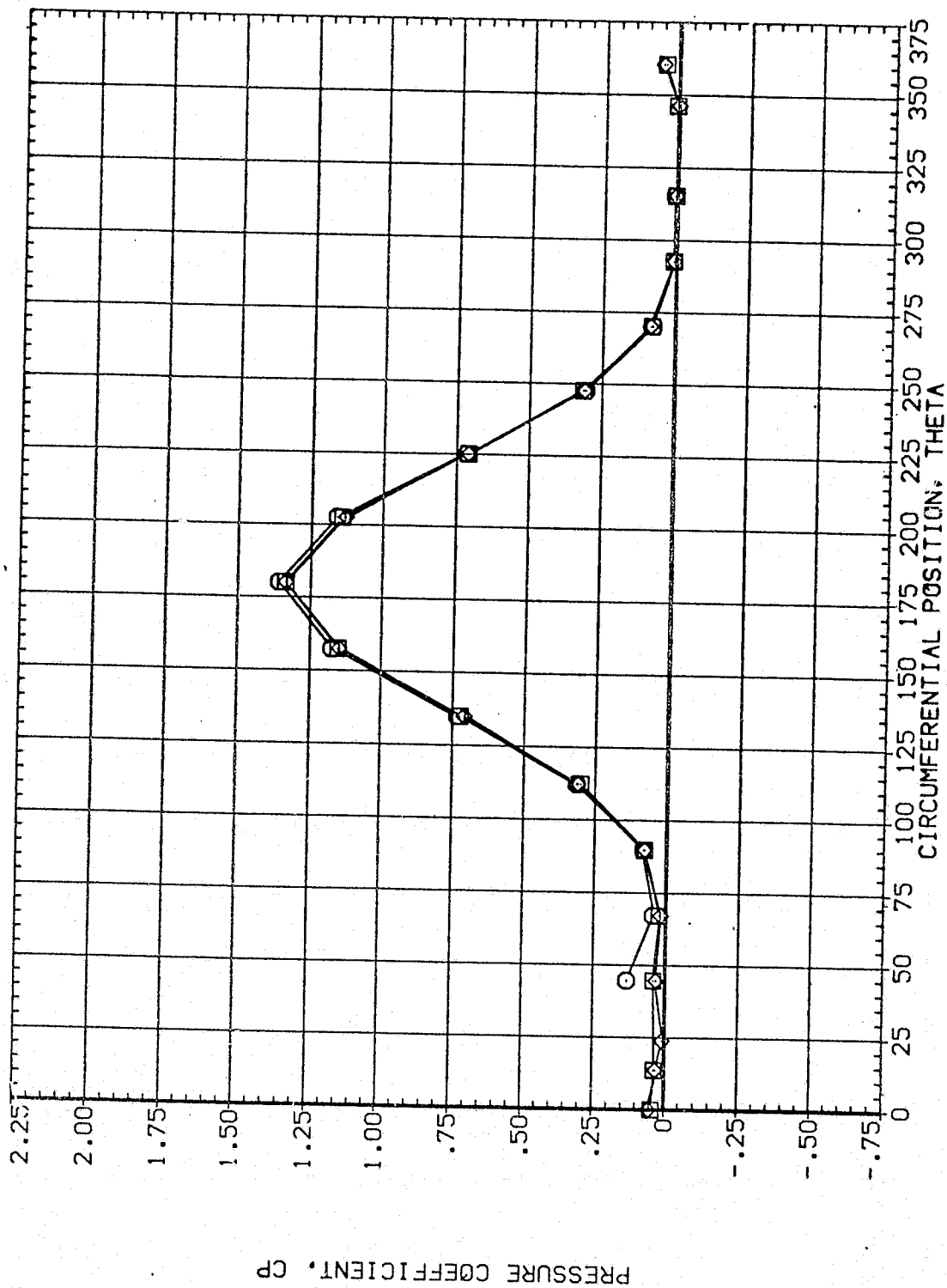


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A064)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
□	.892	60.130	4.960	MMOUNT	PHI	.000
◇	.923					
◇	.954					

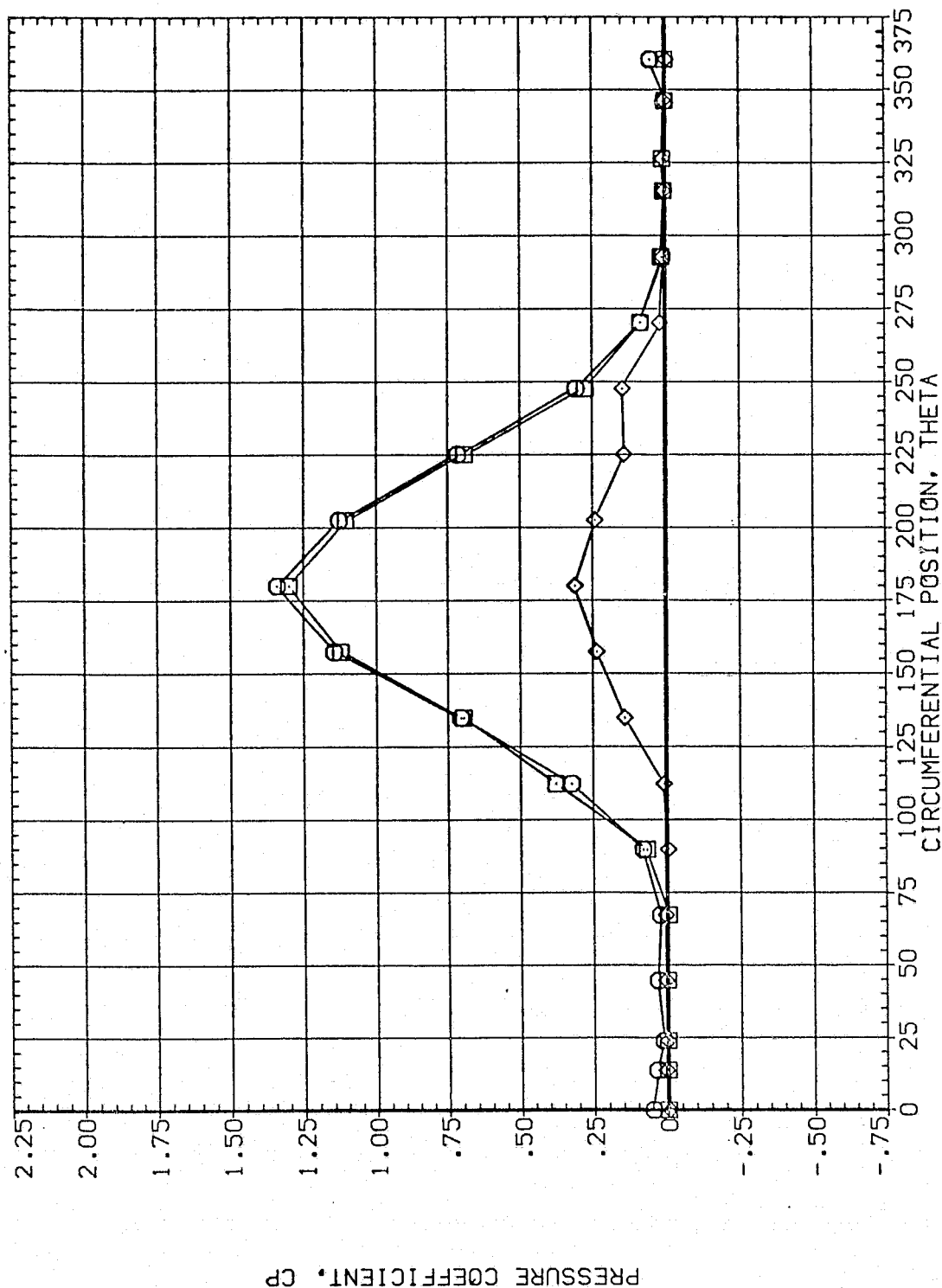


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
◇	.055	63.130	4.960	MOUNT	.000 OFFSET
□	.108				2.000 PHI
◇	.162				60.000

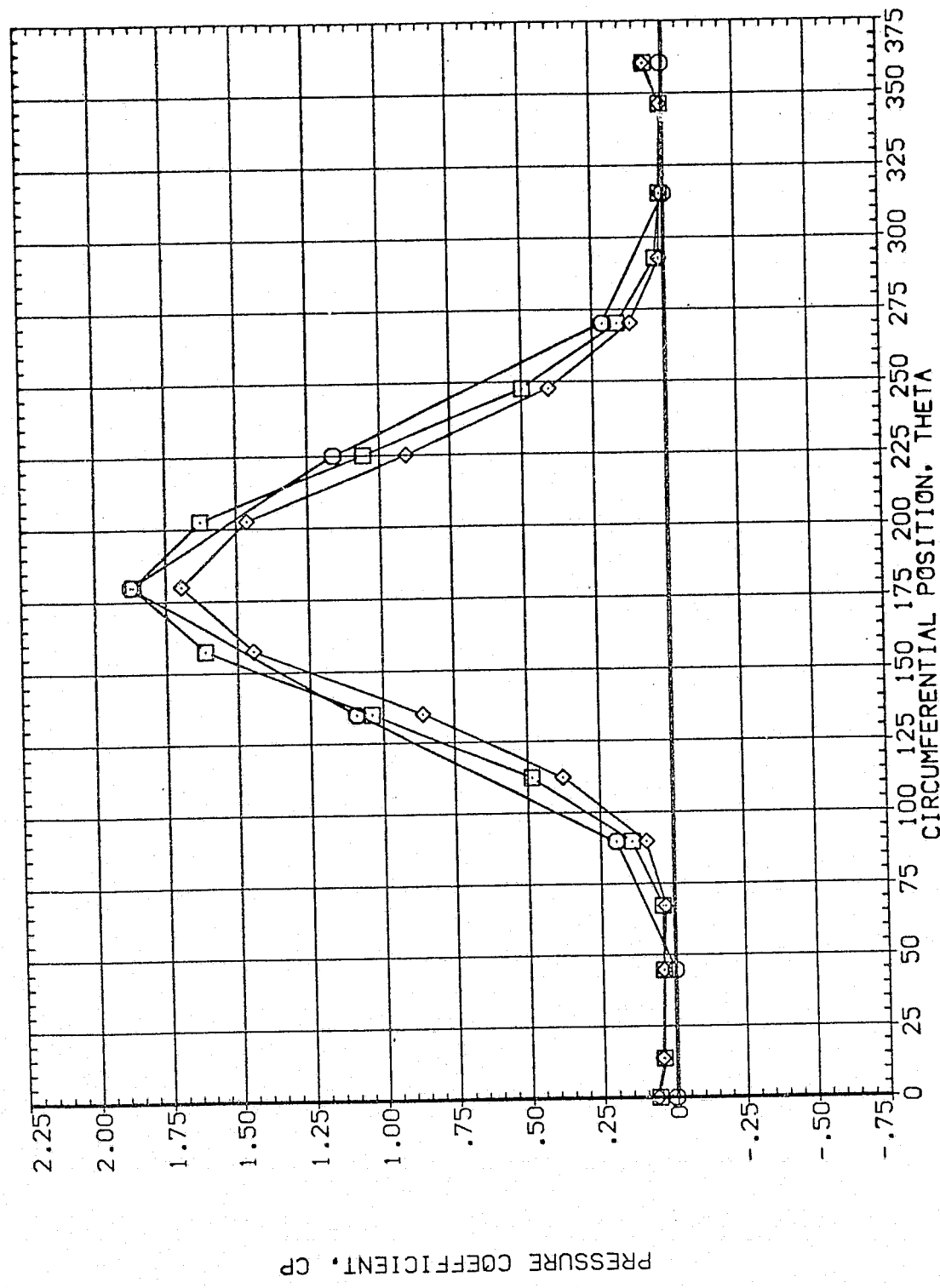


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2617

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.216	63.130	4.960	MOUNT	.000 OFFSET
□	.322				2.000 PHI
◇	.518				60.000

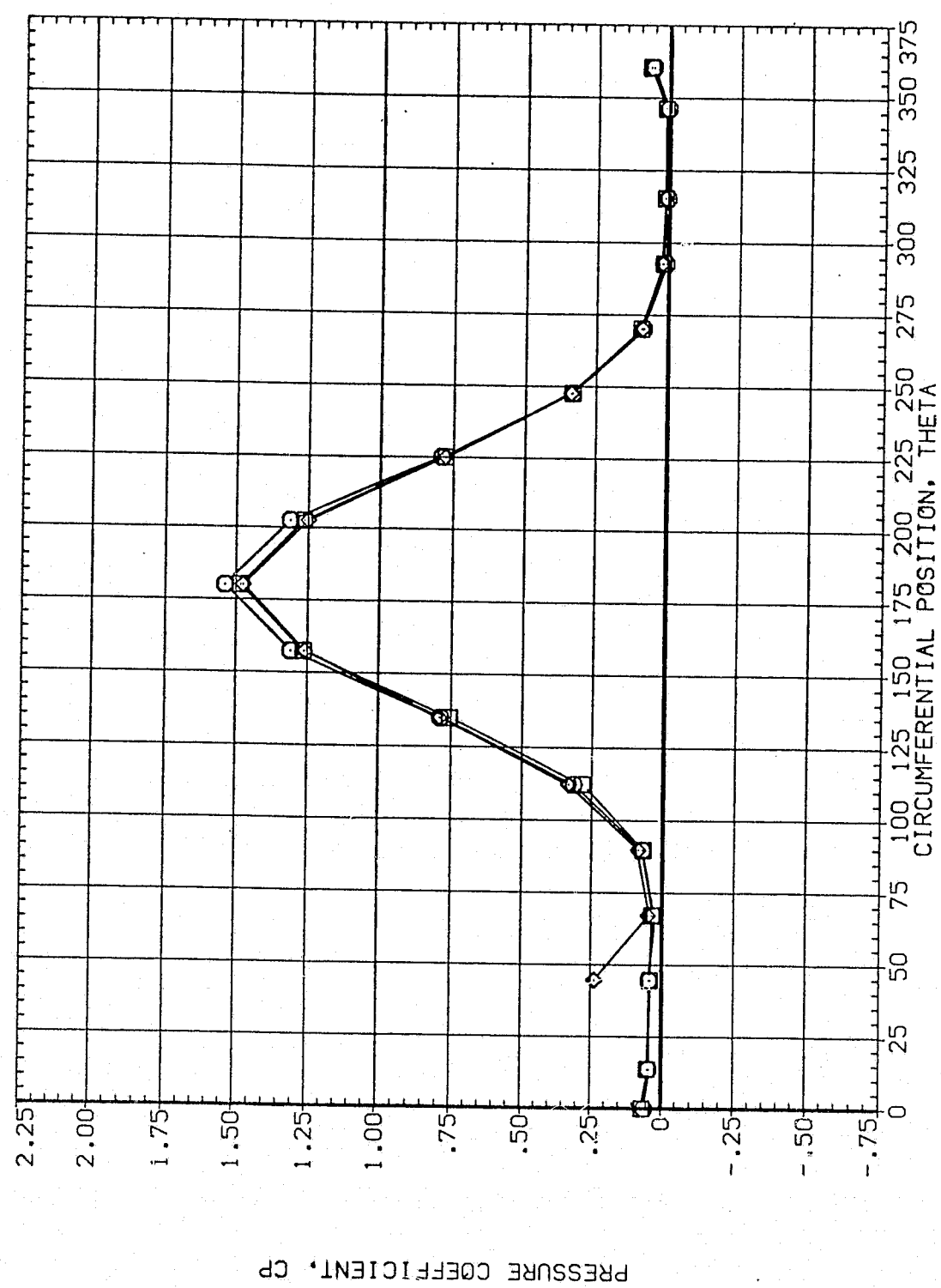


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A065)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	63.130	4.960	MOUNT	.000	60.000
□	.735				2.000	
◇	.860					.000

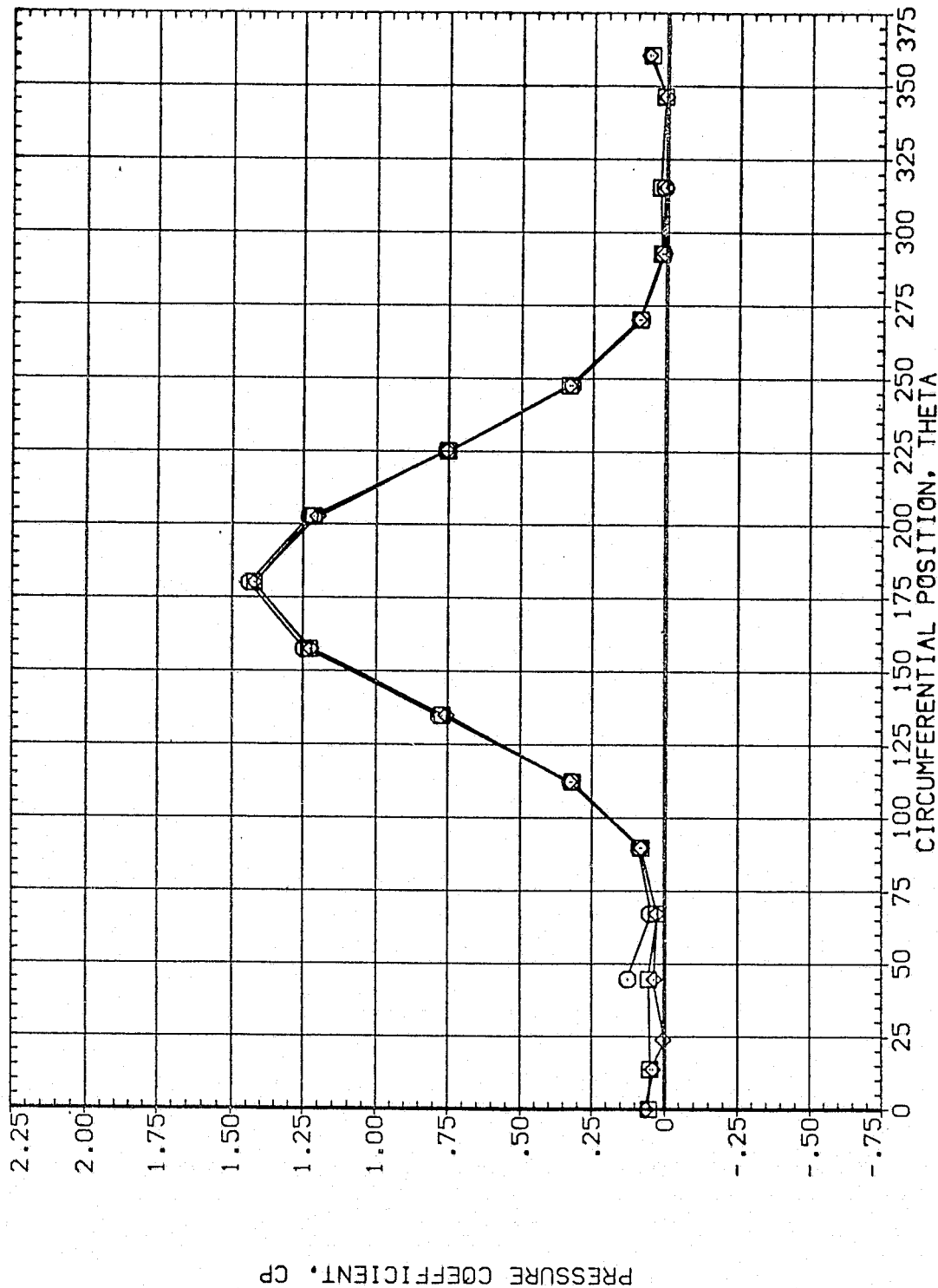


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.892	63.130	4.960	HOUNT	.000
□	.923			OFFSET	.000
◇	.954			PHI	.000

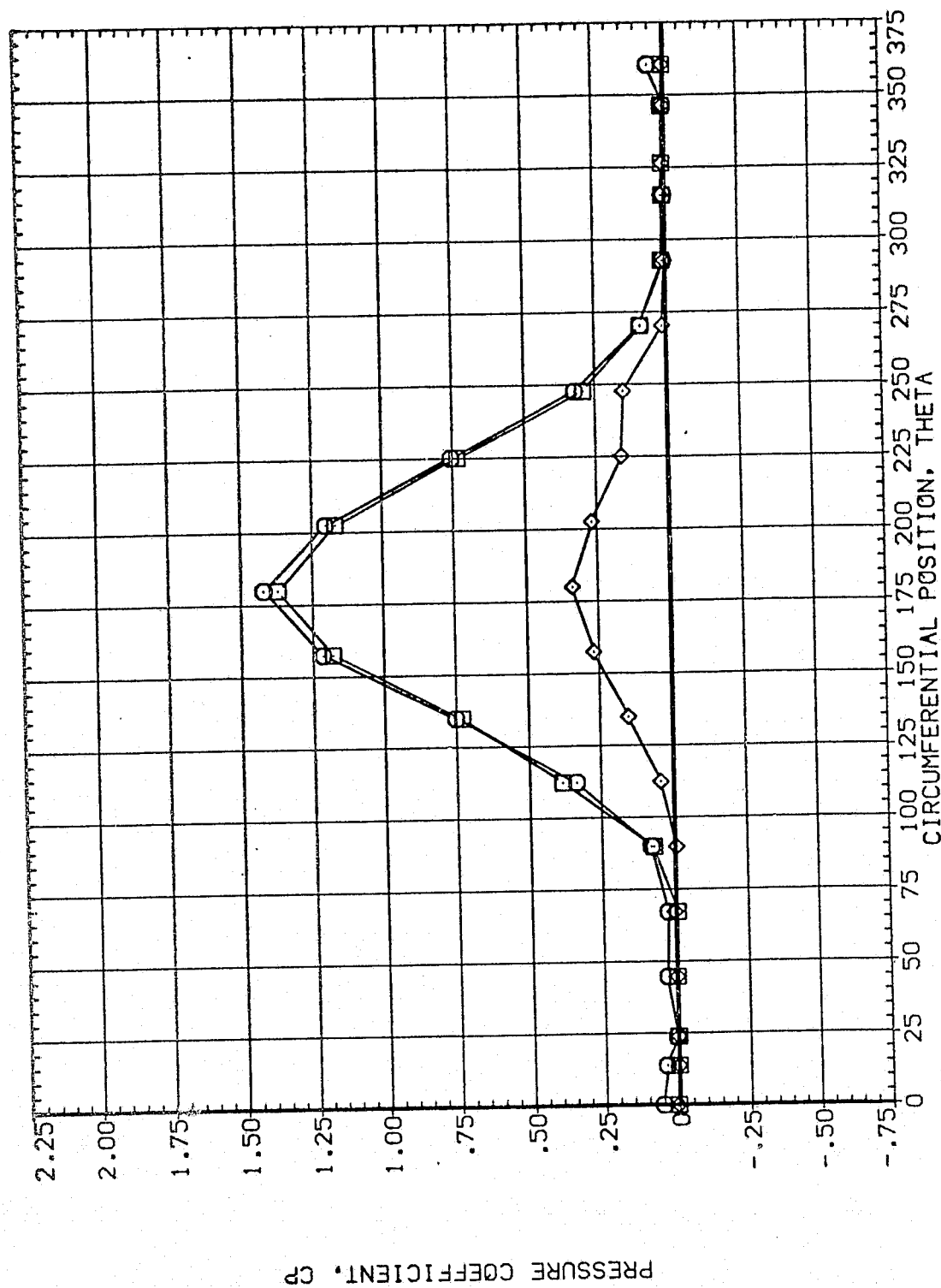


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

PARAMETRIC VALUES
 BETA .000
 HOUNT 2.000
 OFFSET PHI .000

SYMBOL X/LB ALPHA MACH
 ○ .215
 □ .322
 ◇ .518

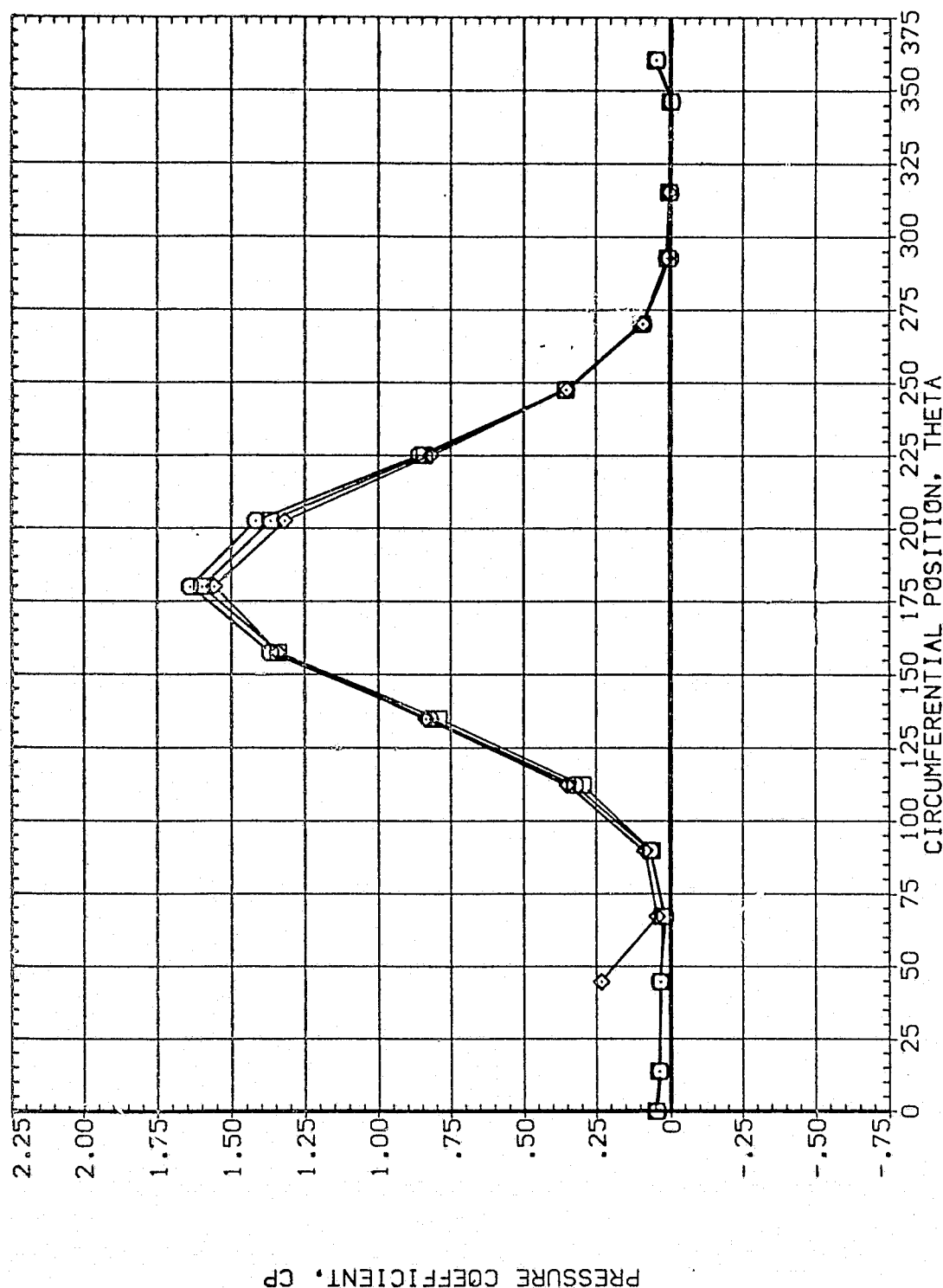


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A066)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
◇	.610	66.130	4.960	2.000	.000	.000
□	.735					
◇	.860					

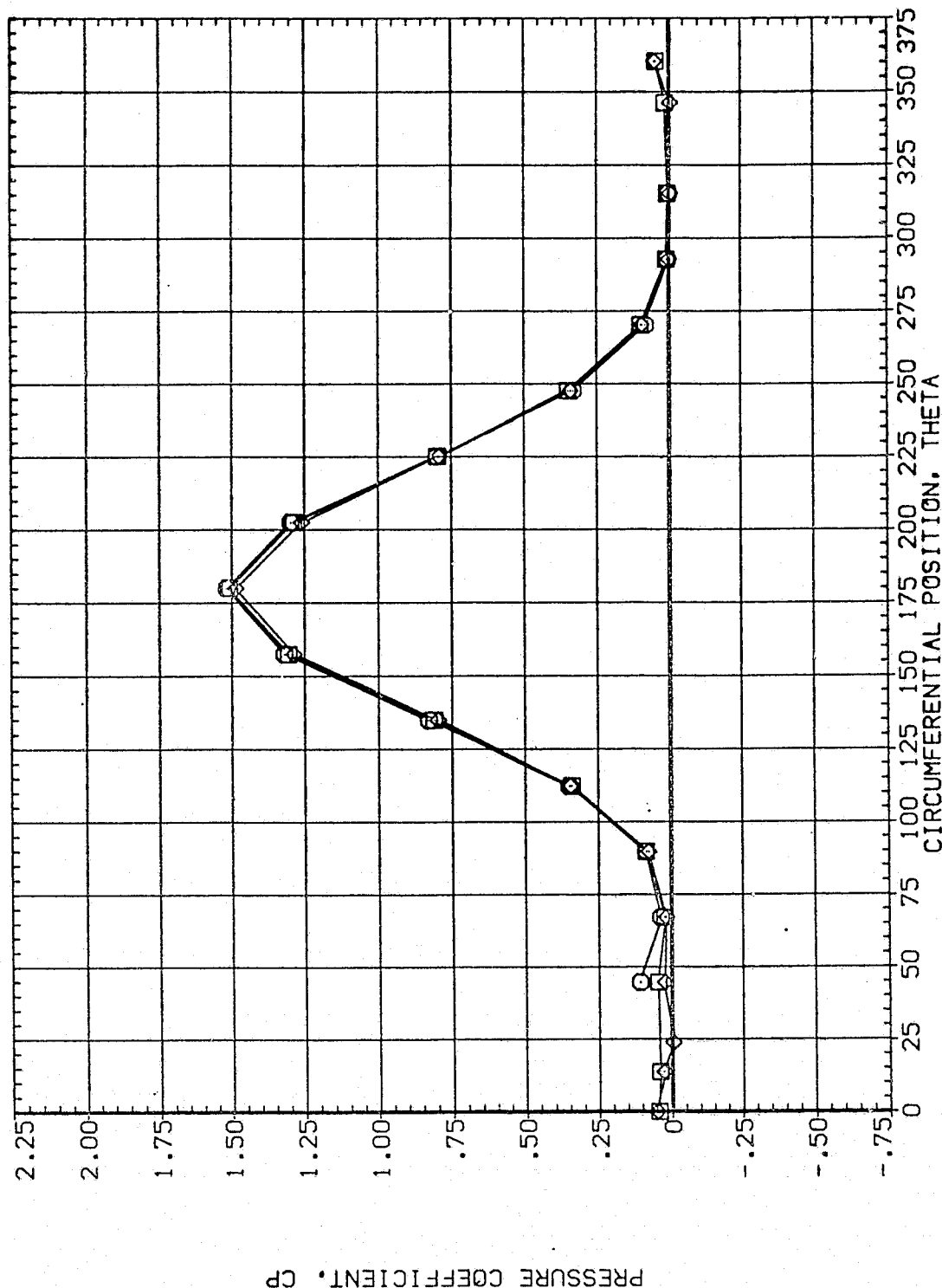


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

(P1A066)

SYMBOL
□
◇

X/LB
.892
.923
.954

ALPHA
66.130

HACH
4.960

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000
CFFSET
PHI

60.000
.000

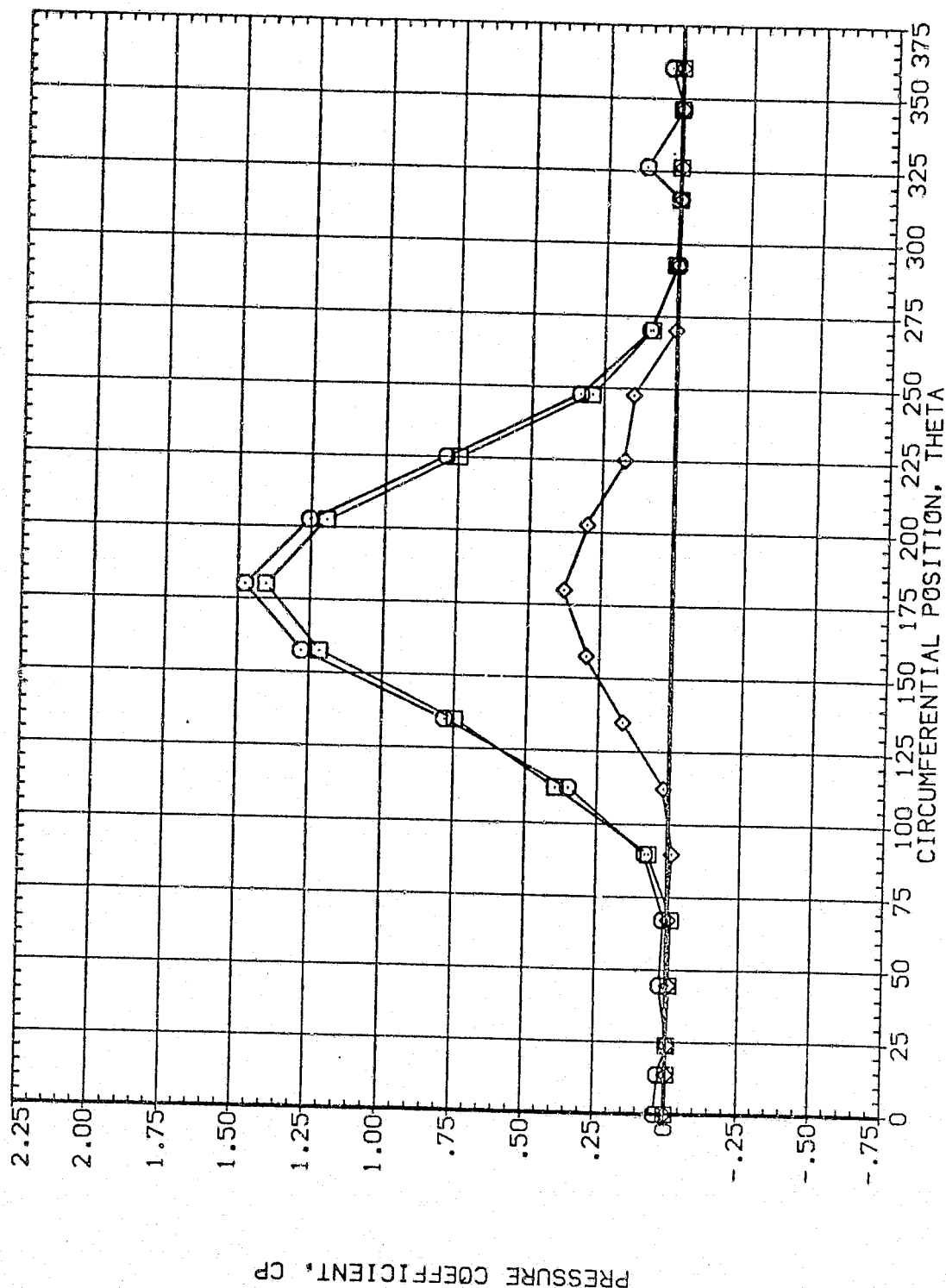


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL
 □
 ○
 ◇

X/LB .055
 .108
 .162

ALPHA 69.130

MACH 4.960

BETA
 MOUNT

PARAMETRIC VALUES
 .000 OFFSET
 2.000 PHI
 60.000
 .000

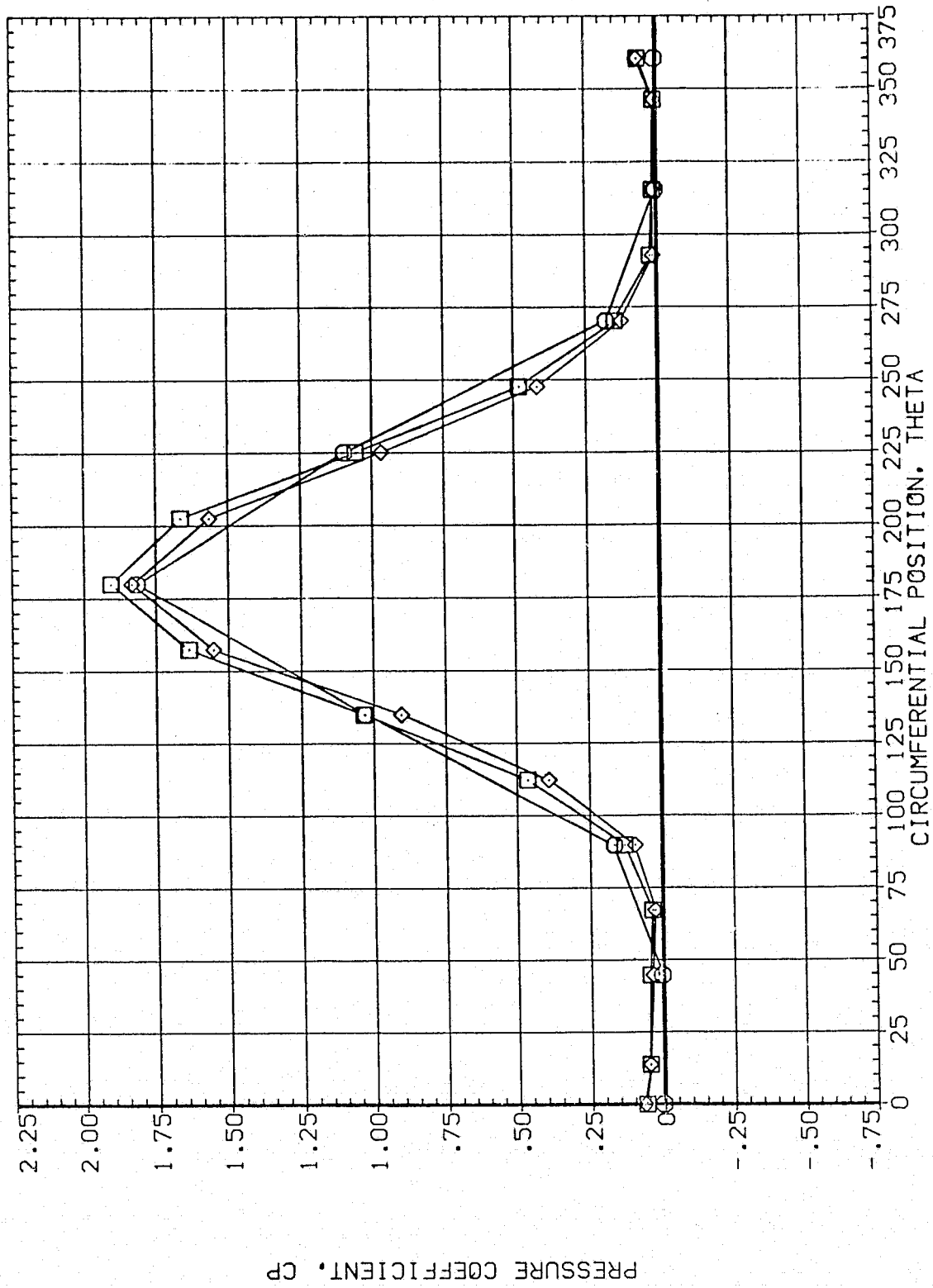


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	60.000
				MOUNT	2.000	PHI

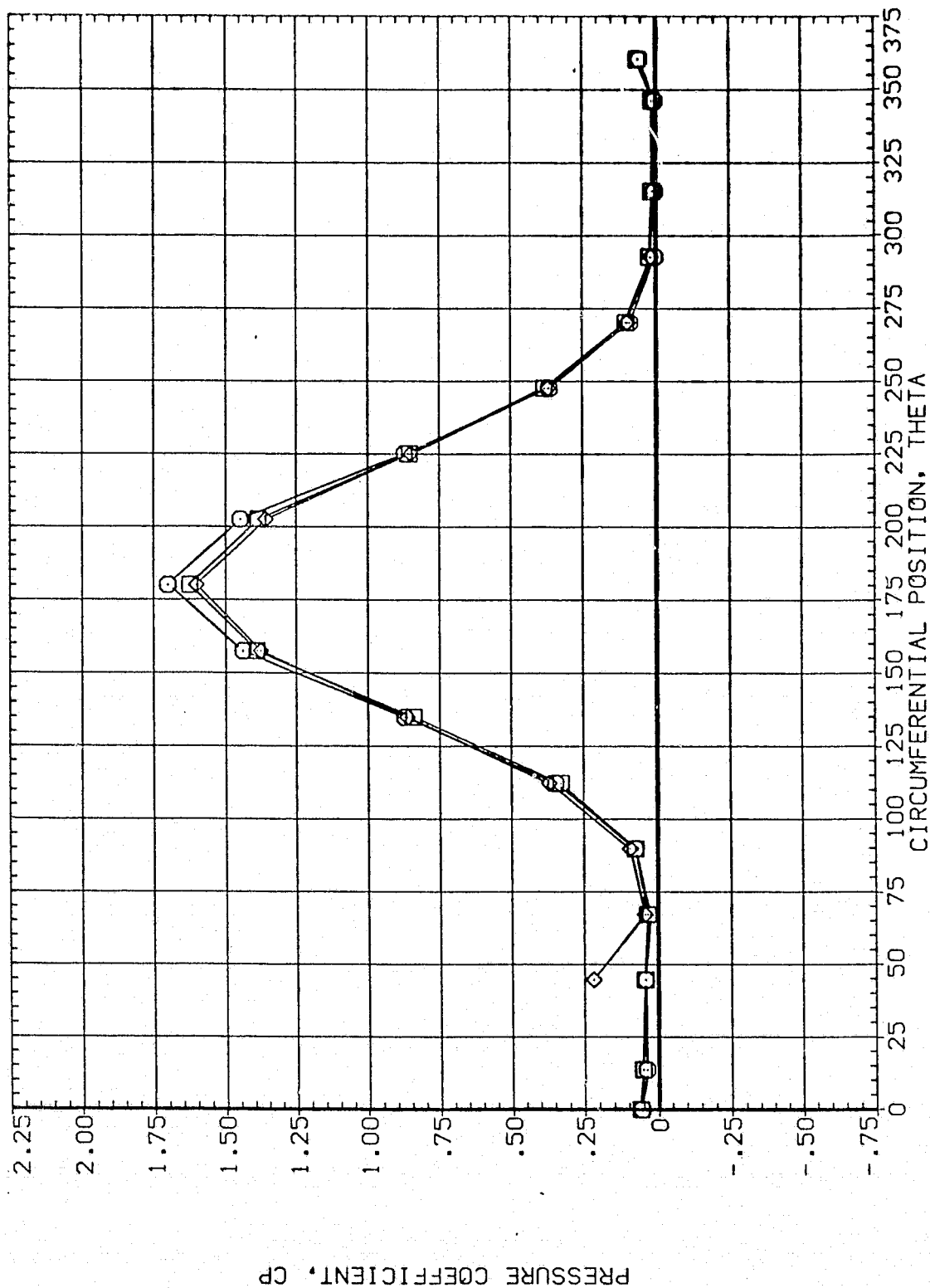


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A067)

SYMBOL X/LB ALPHA MACH
 □ .610 69.130 4.960
 ◇ .735
 ◇ .860

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 60.000
 .000

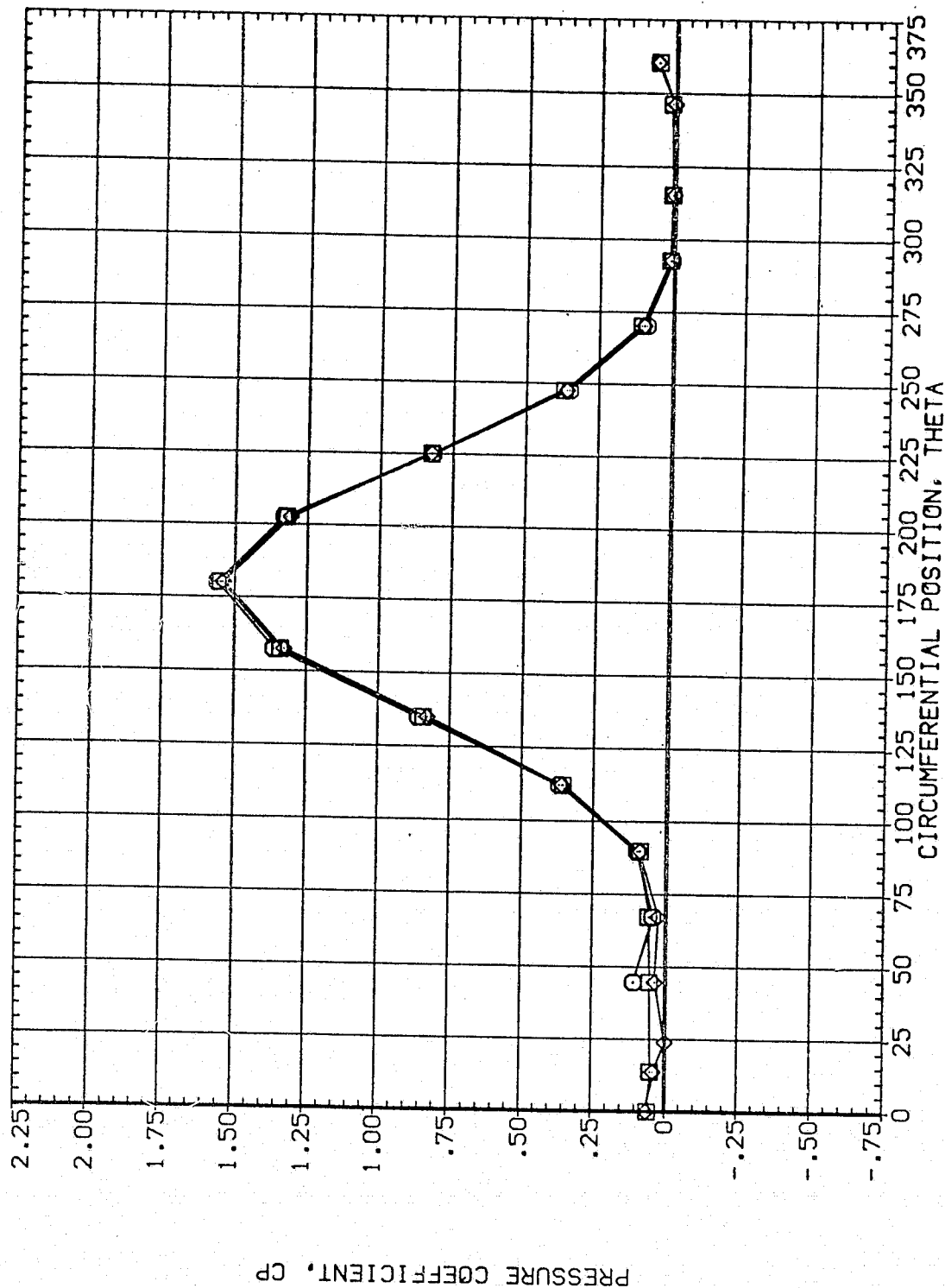


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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SYMBOL X/LB ALPHA MACH
 ○ .892
 □ .923
 ◇ .954

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI .000

60.000
 .000

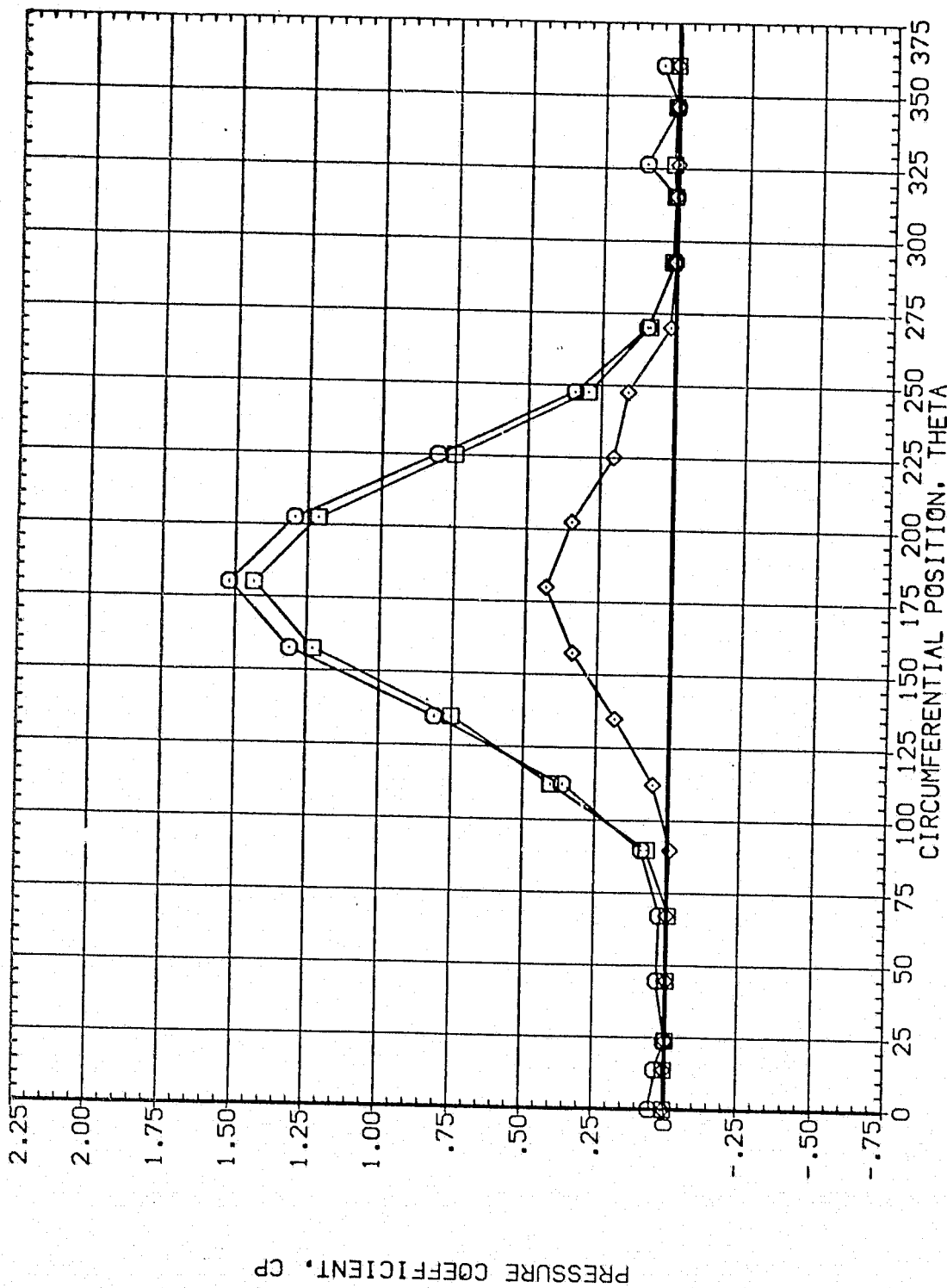


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.055	69.980	4.960	HUNT	.000	80.000
◇	.108				2.000	
◇	.162					.000

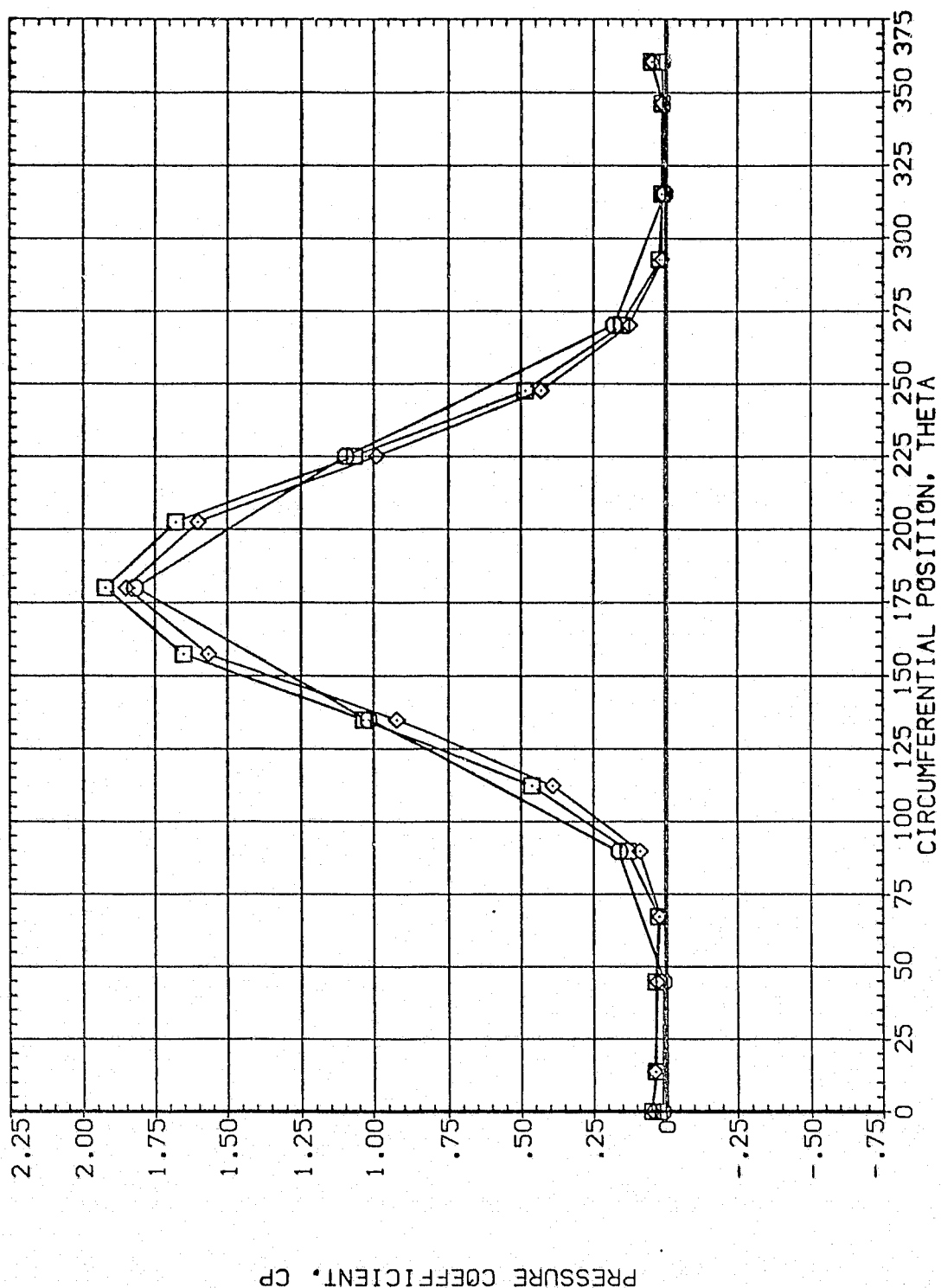


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL X/LB ALPHA 69.980 MACH 4.960
 □ .216
 ◇ .322
 ◇ .518

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 PHI 80.000
 .000

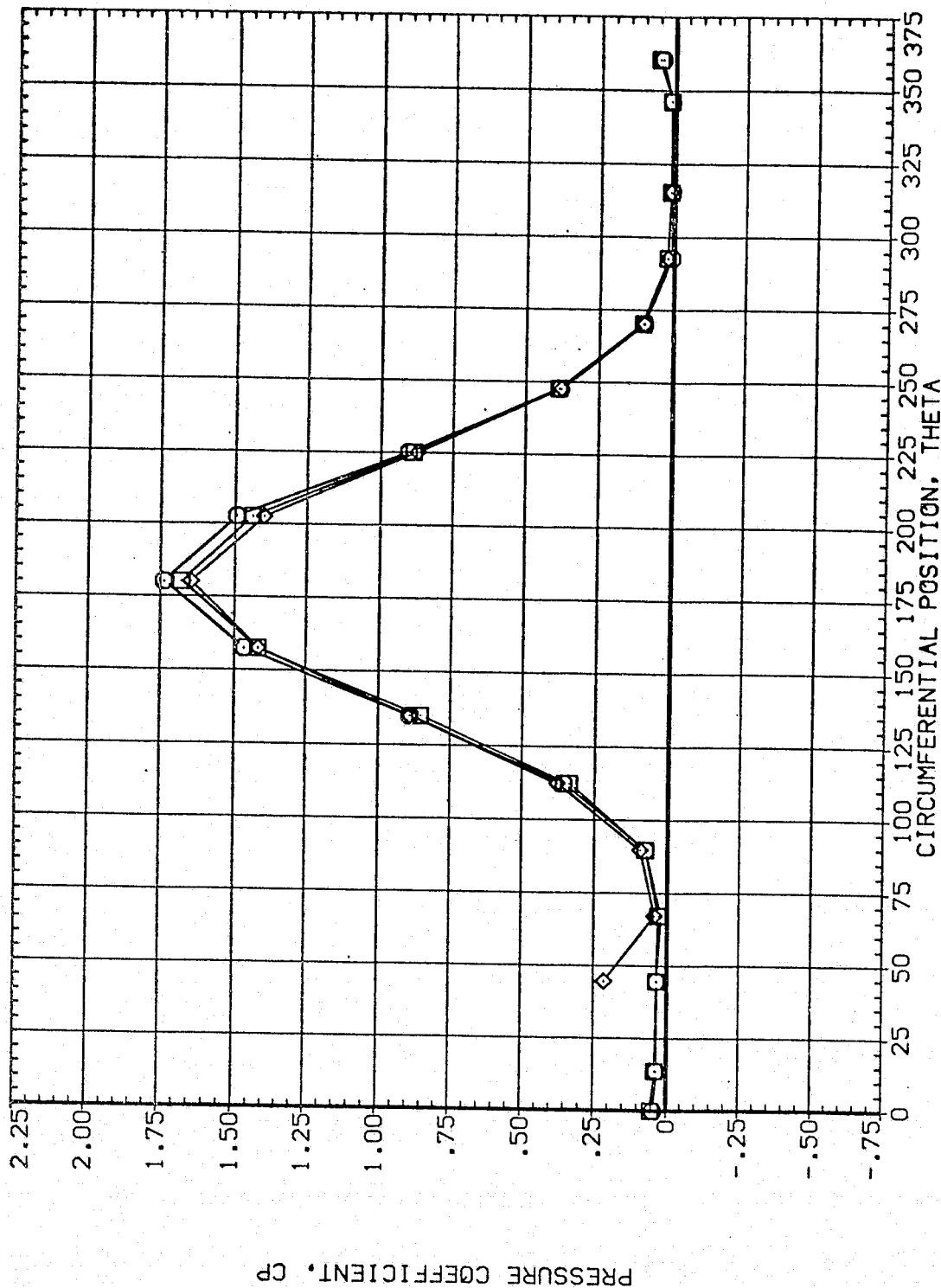


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A068)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	69.980	4.960	MOUNT	.000	60.000
□	.735				2.000	
◇	.860					.000

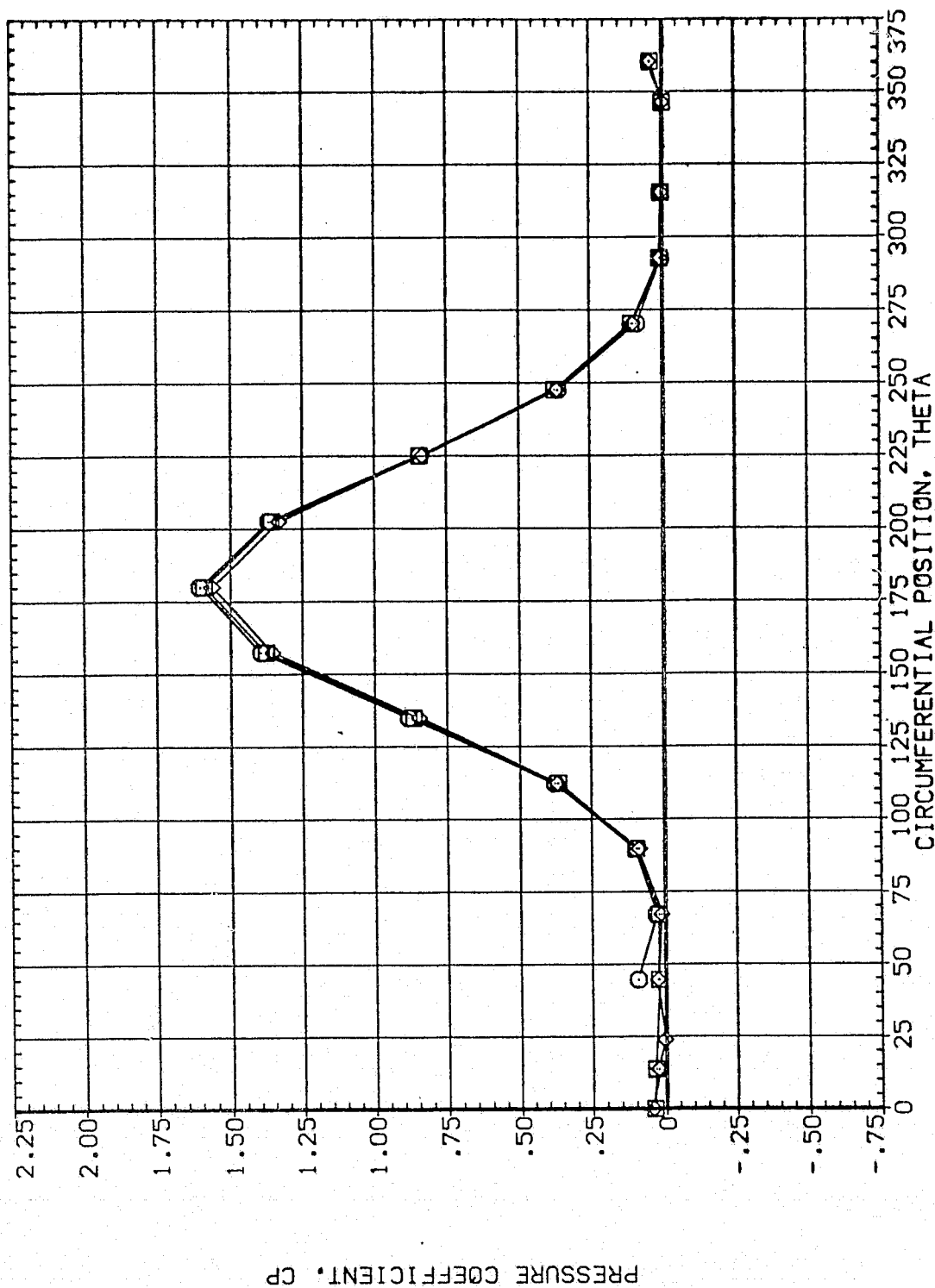


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.892	69.980	4.960	MCUNT	.000	80.000
□	.923				2.000	
◇	.954					.000

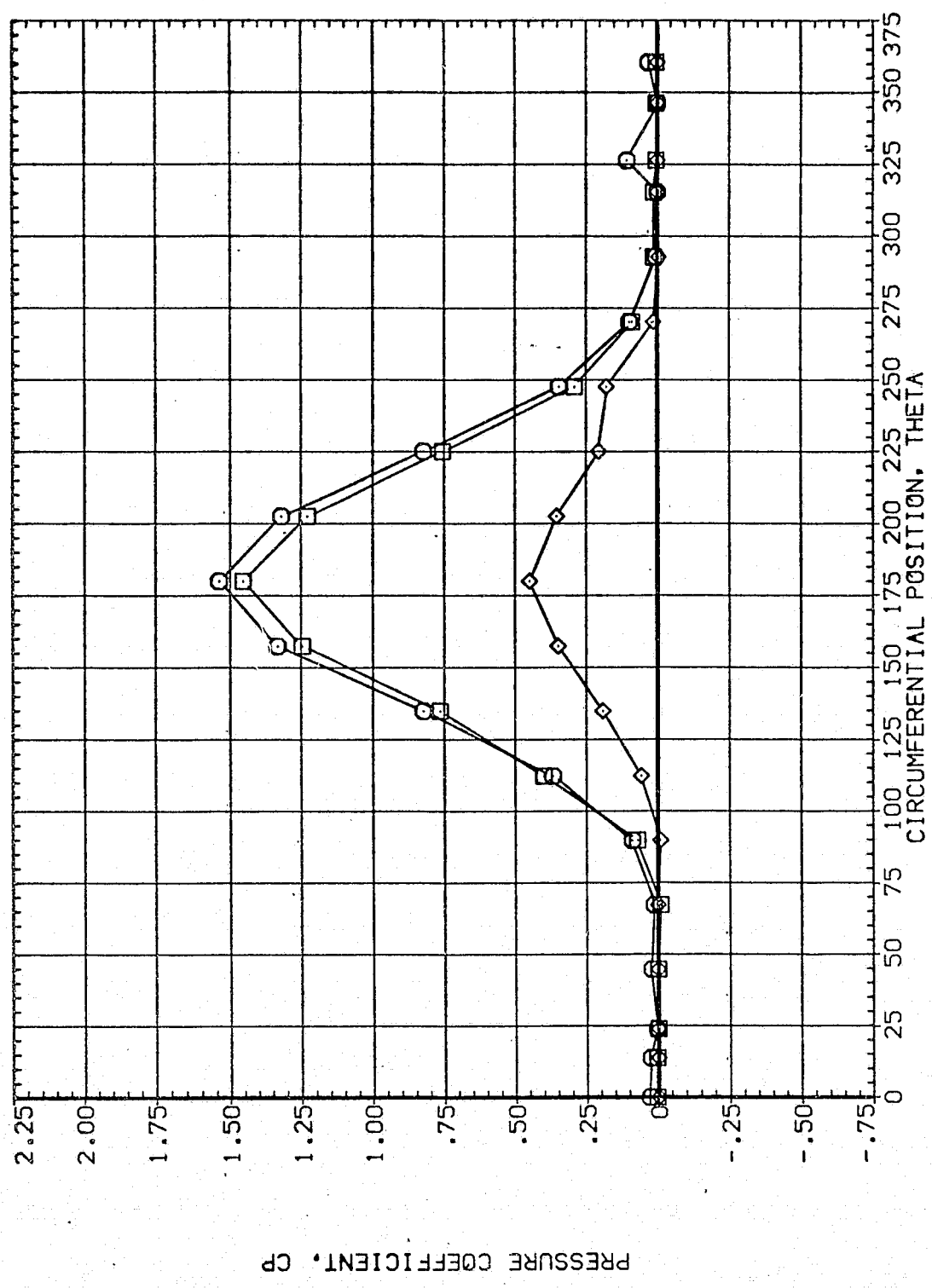


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

PAGE 2632

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (PIA069)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	71.880	4.960	MOUNT	.000	80.000
□	.108				2.000	.000
◇	.162					

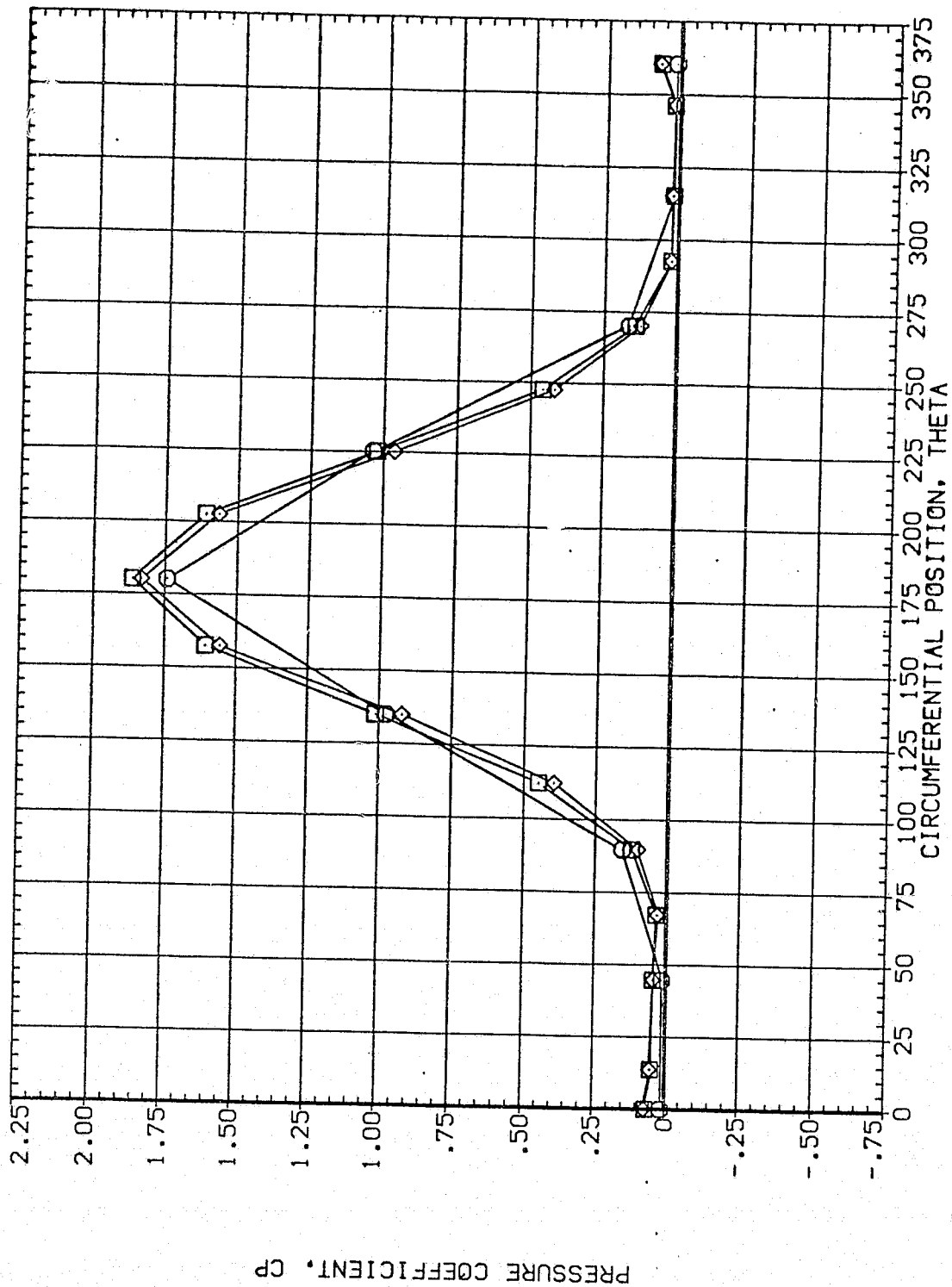


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	.216	71.860	4.960	MOUNT	.000 OFFSET 80.000
◇	.322				2.000 PHI .000
◇	.518				

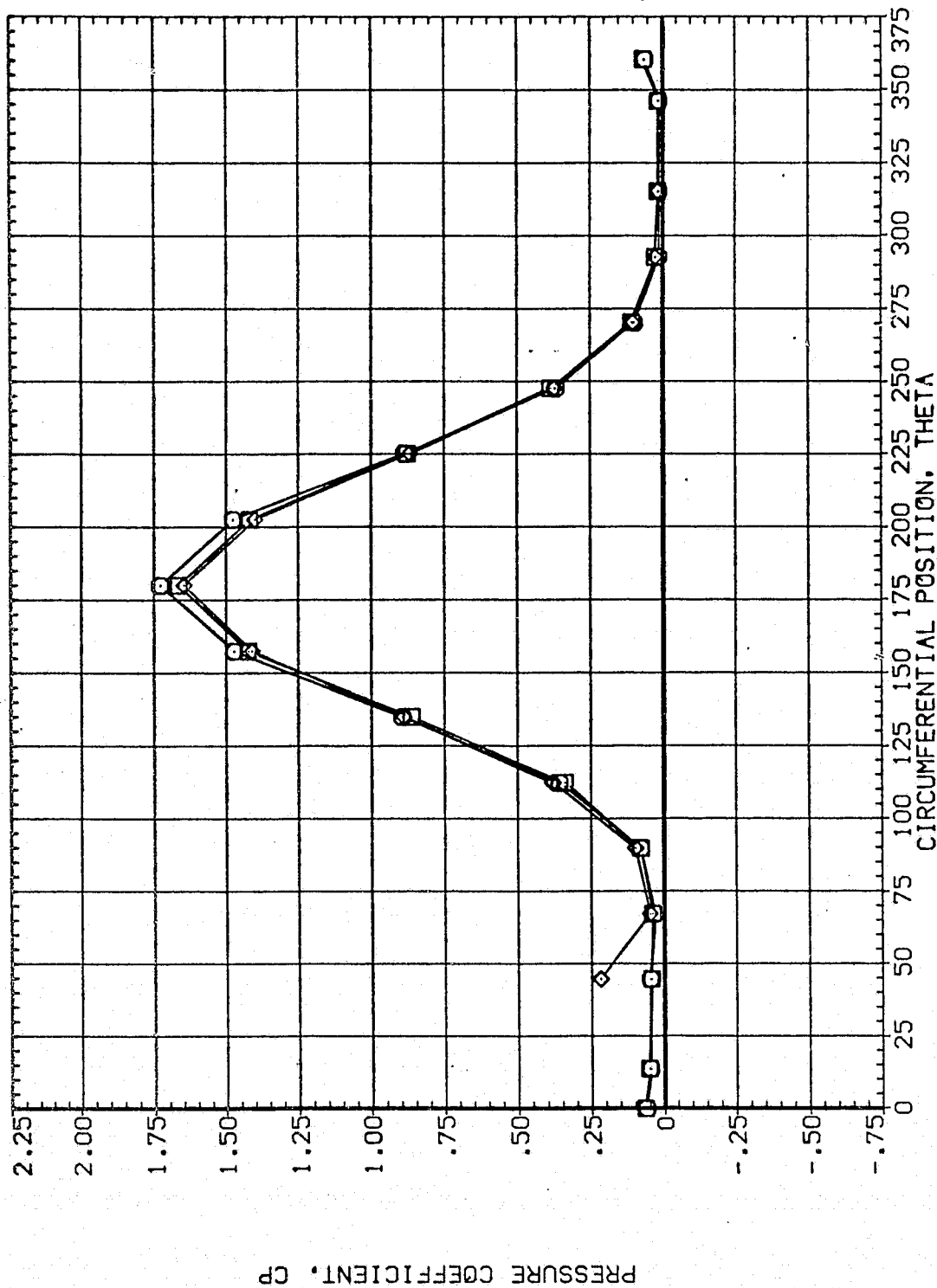


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A069)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	80.000
○	.610	71.880	4.960	2.000	PHI	.000
□	.735					
◇	.860					

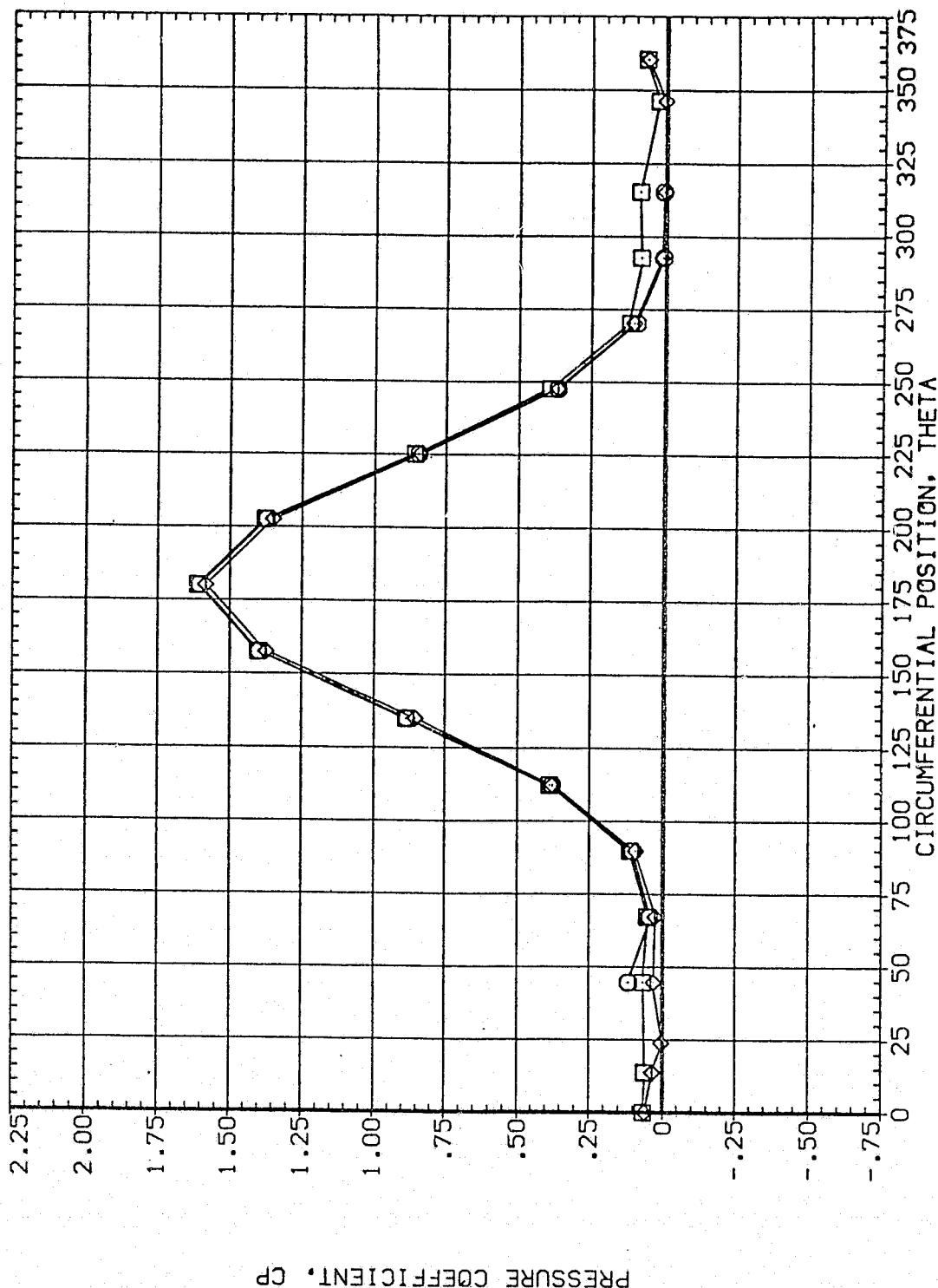


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

(P1A069)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

PARAMETRIC VALUES
 .000 .000
 .000 .000
 2.000 PHI

BETA
 MOUNT

ALPHA
 71.880

MACH
 4.960

SYMBOL X/LB
 .892
 .923
 .954

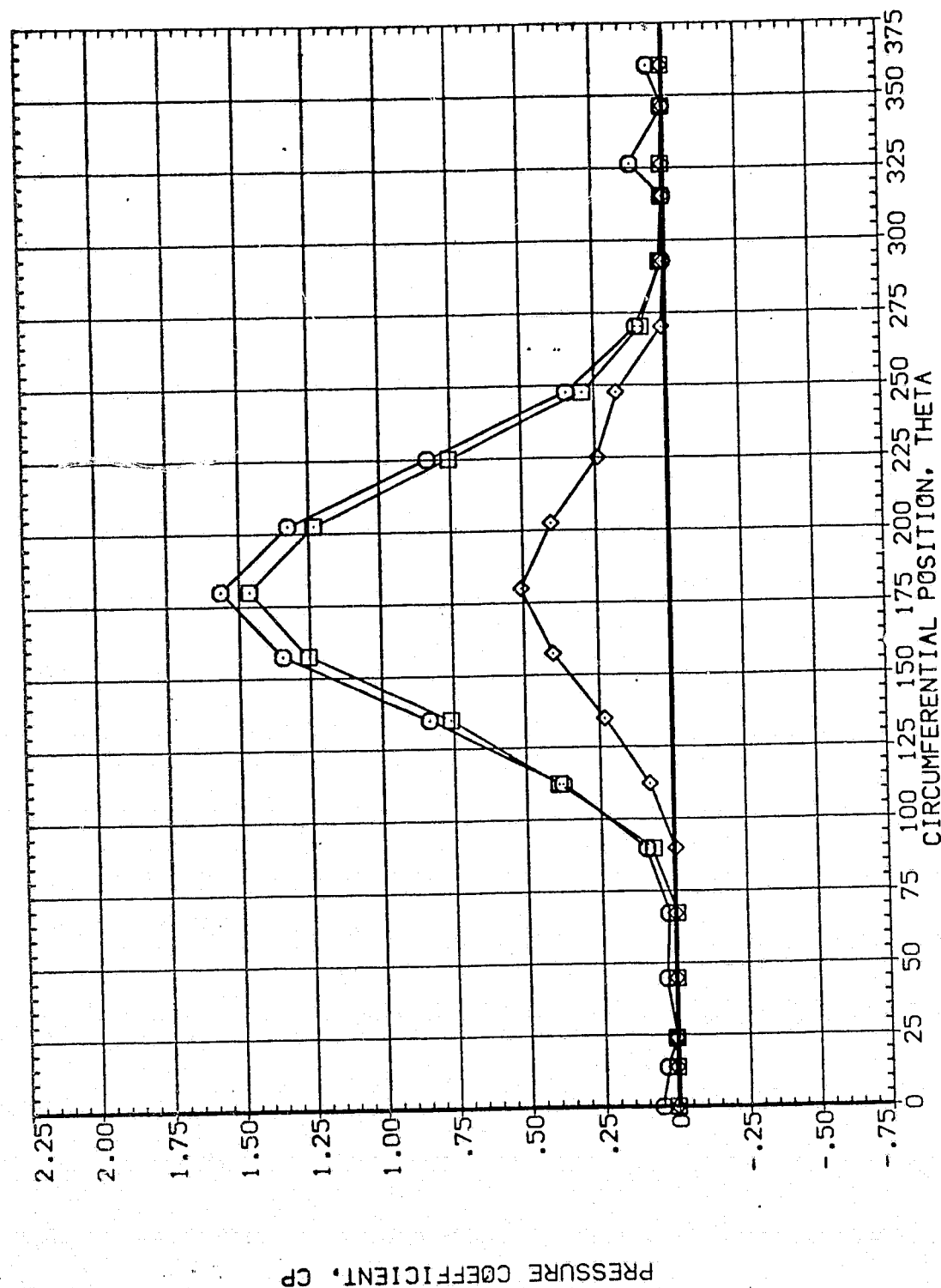


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2636

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	80.000
□	.055	74.860	4.960	MOUNT	2.000	PHI
◇	.108					.000
◇	.162					

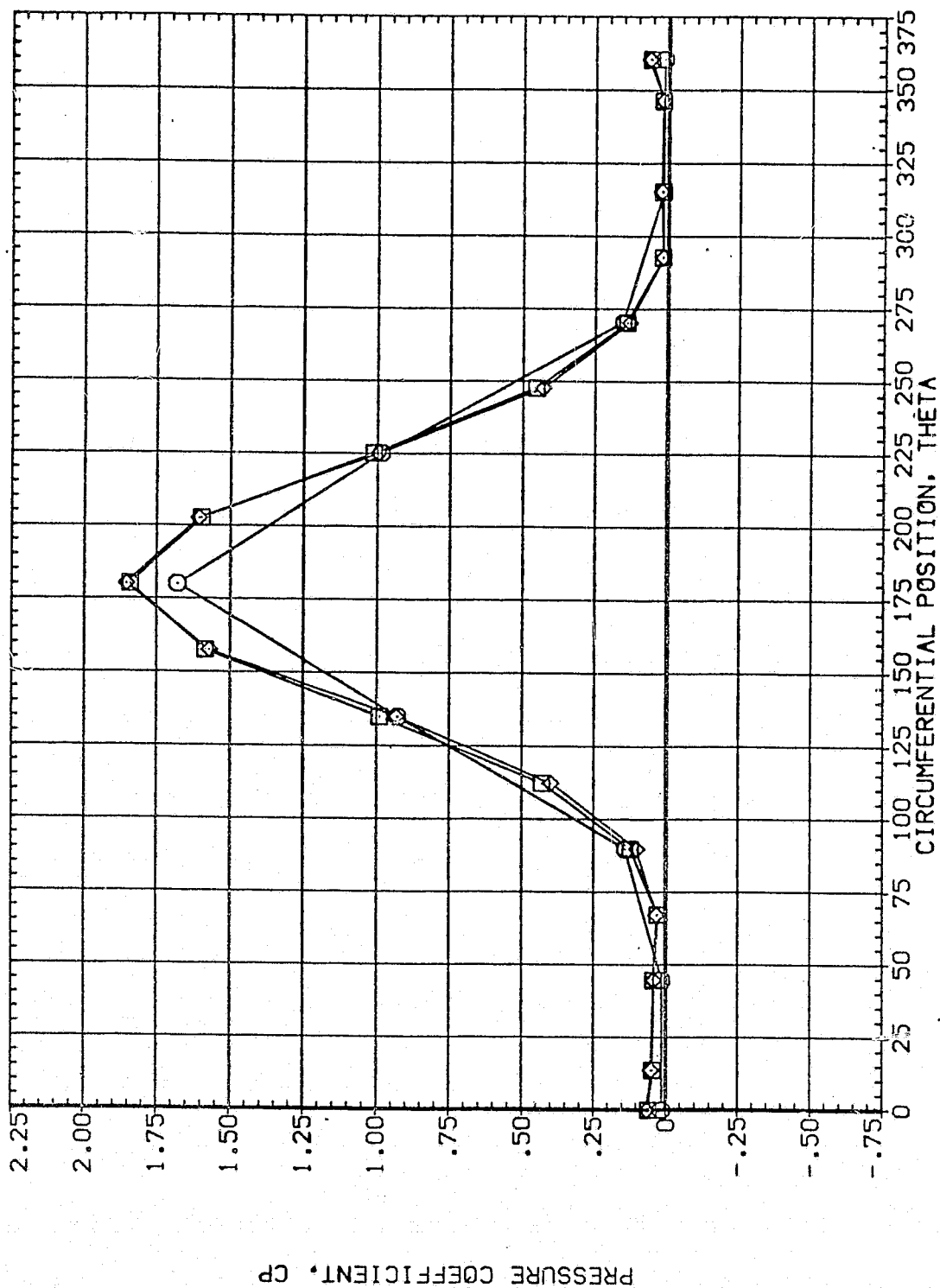


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.216	74.860	4.950	.000	.000	.000
◇	.322			2.000		
◇	.518					

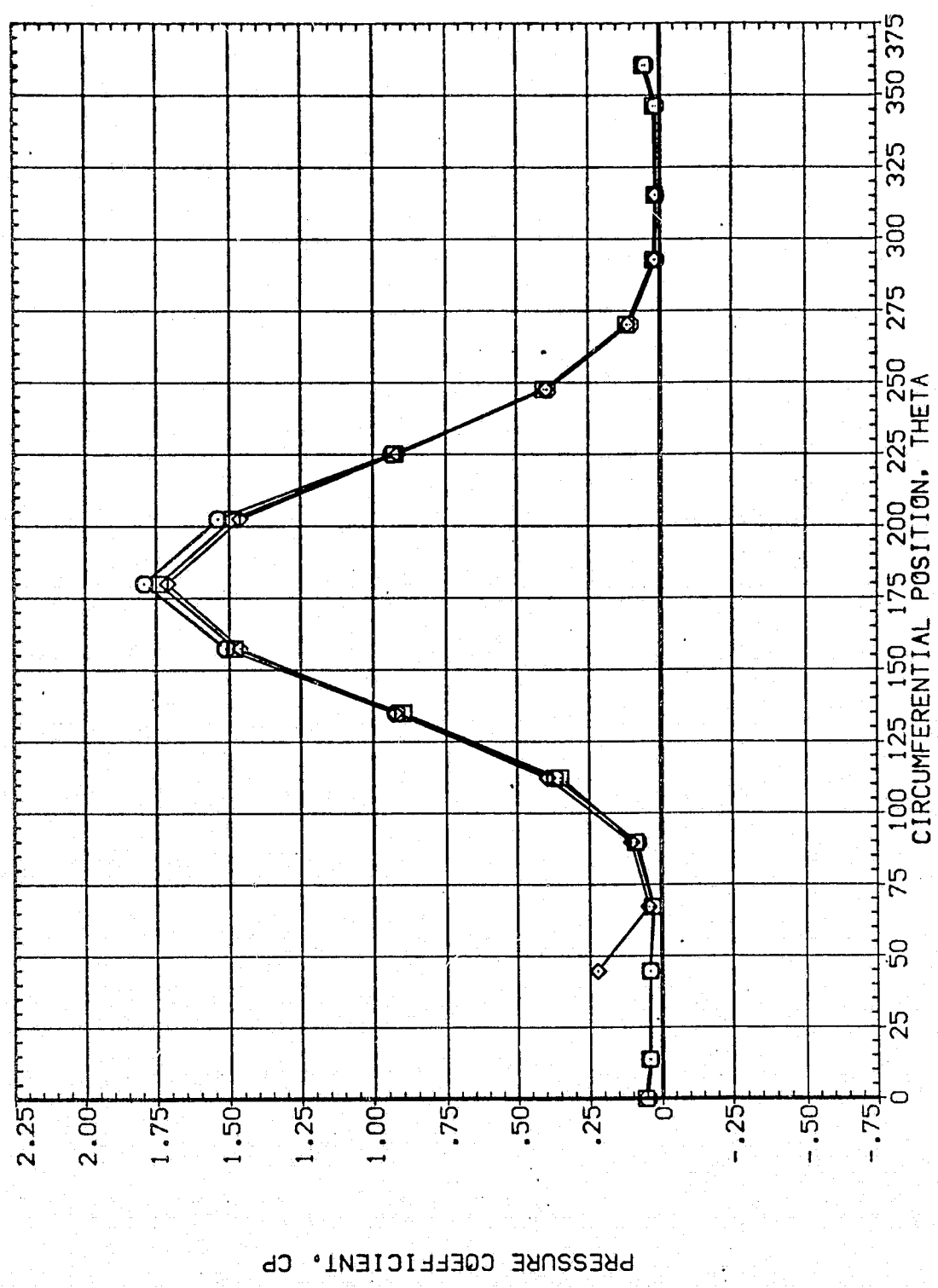


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A070)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	80.000
□	.610	74.860	4.960	MOUNT	2.000	PHI
◇	.735					.000
◇	.860					

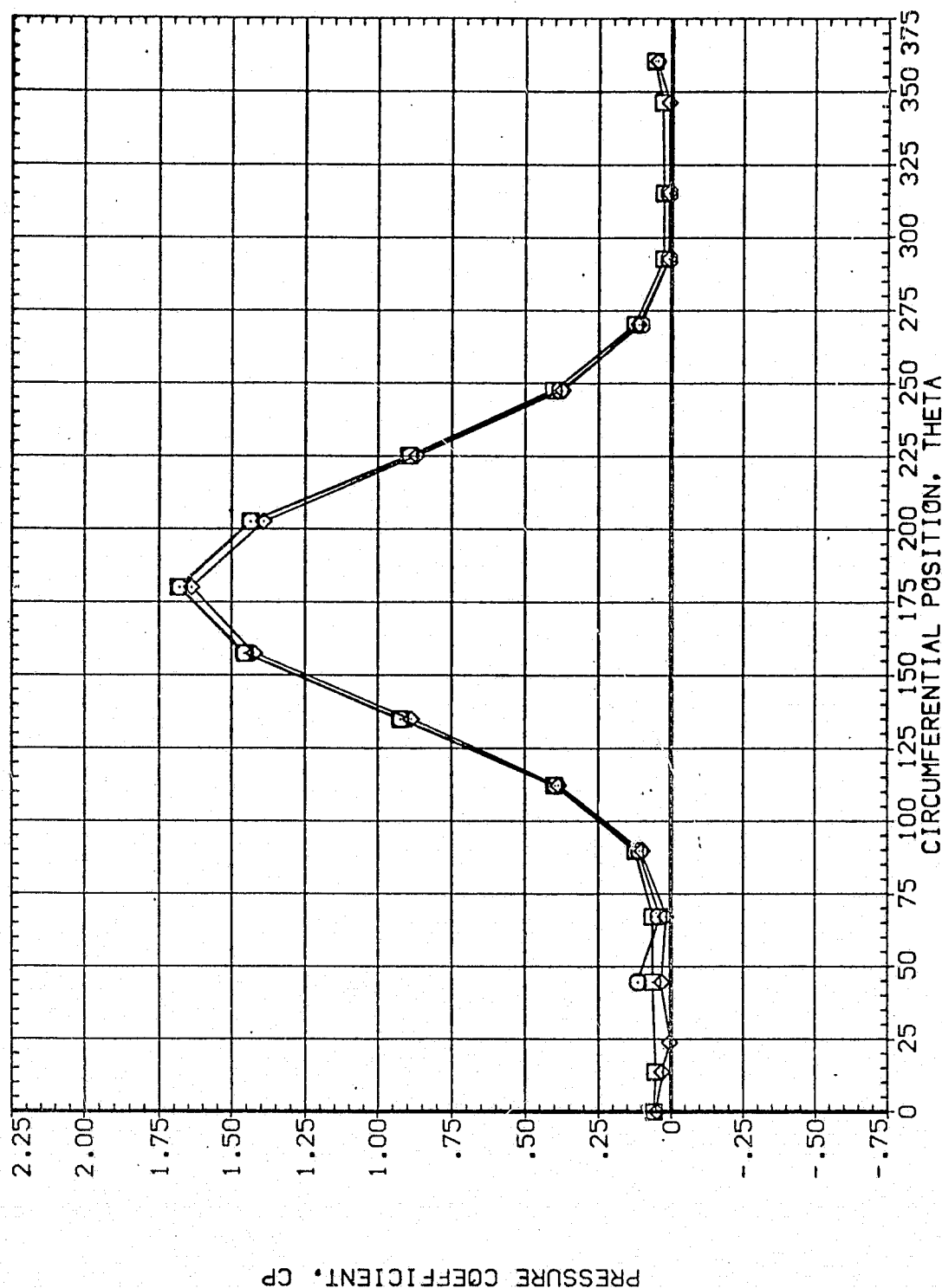


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.892	74.860	4.960	.000	.000	.000
□	.923			2.000		
◇	.954					

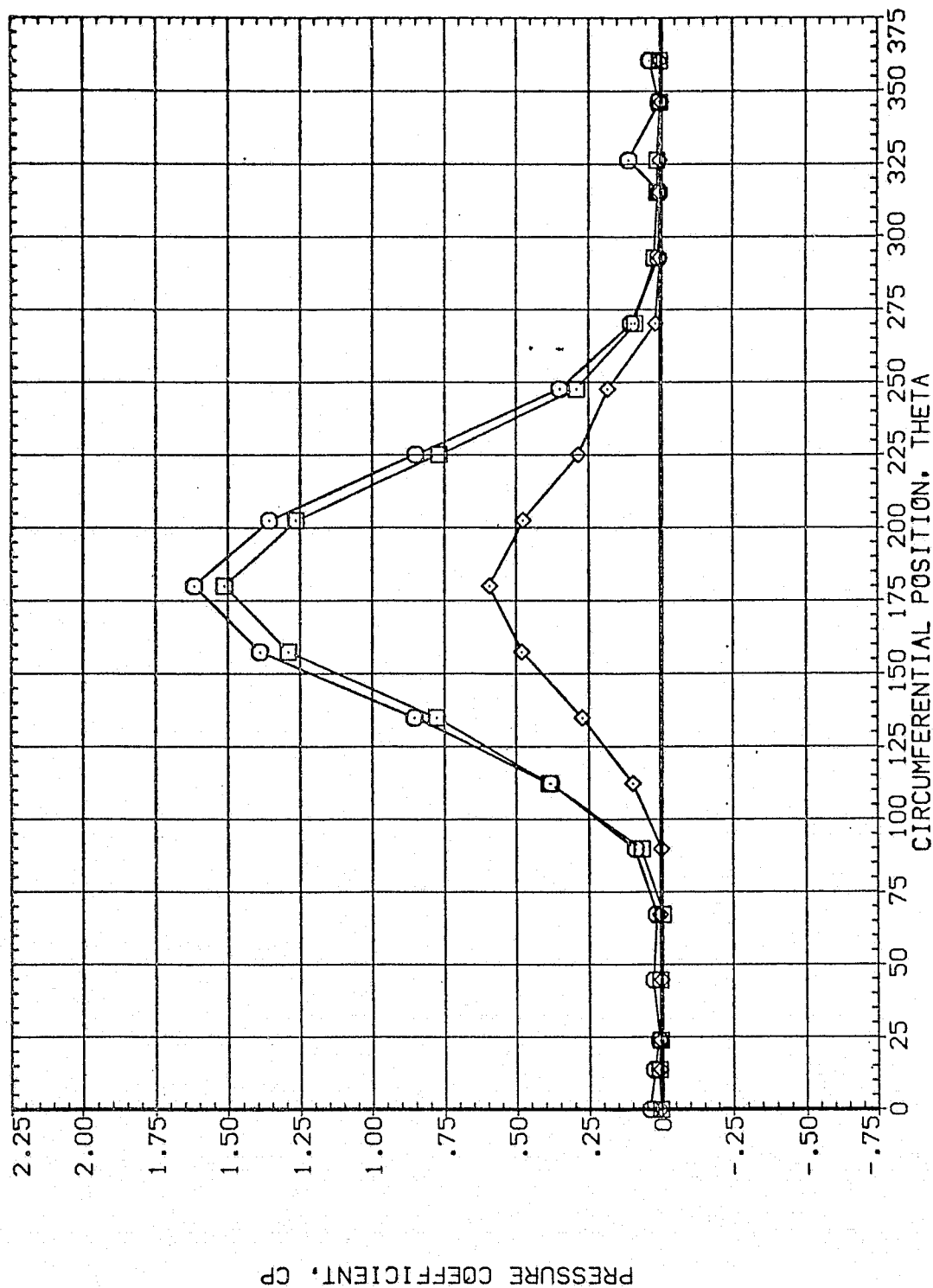


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2640

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL X/LB ALPHA MACH
 ◊ .055 77.880 4.960
 □ .108 .162

PARAMETRIC VALUES
 BETA .000
 HOUNT 2.000
 OFFSET PHI 80.000
 .000

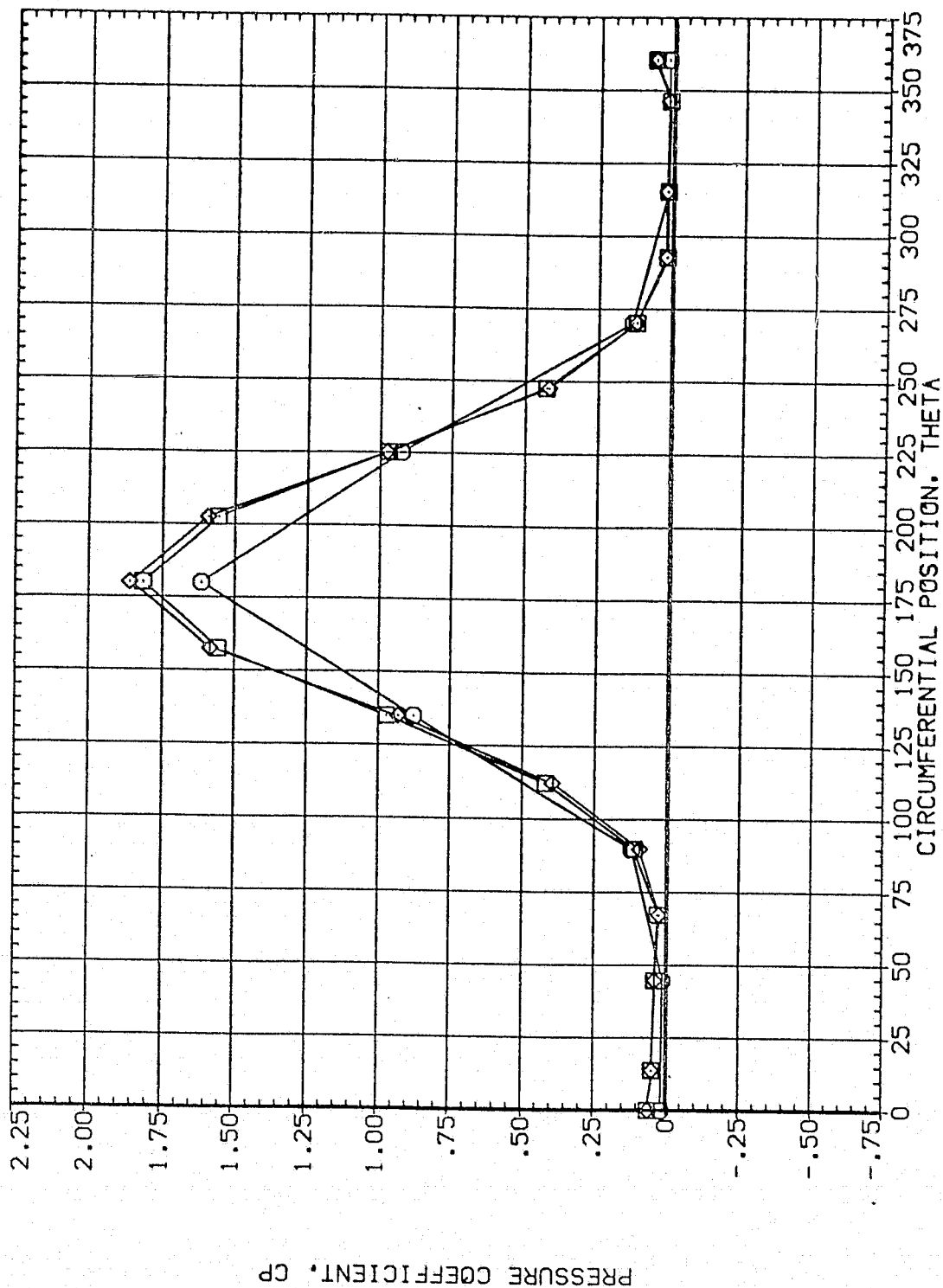


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL	X/LB	ALPHA	HACH
○	.216	77.880	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES	
BETA	OFFSET
MOUNT	PHI
	.000
	.000

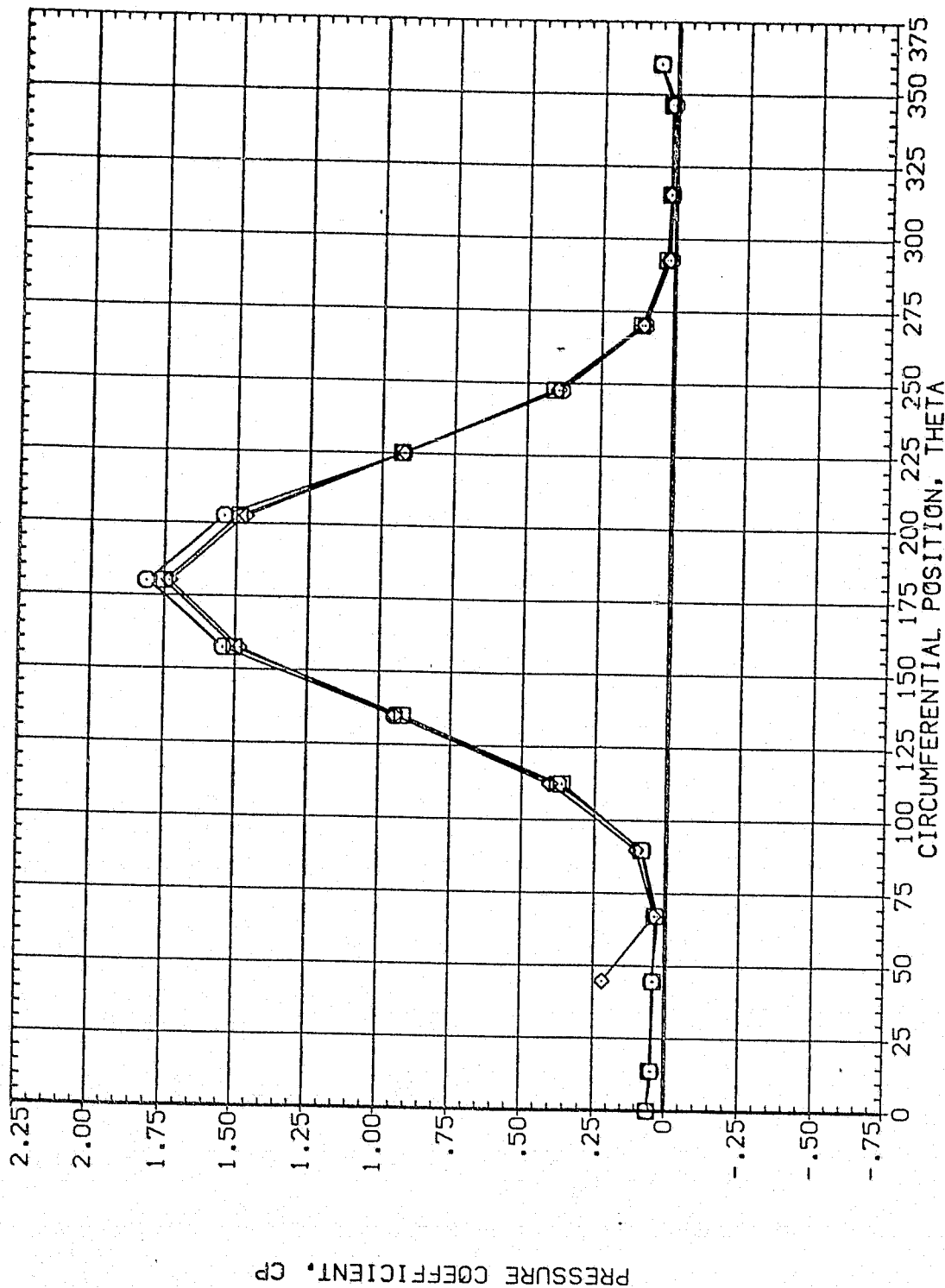


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A071)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA/	OFFSET	80.000
○	.610	77.880	4.960	HOUNT	PHI	.000
□	.735					
◇	.860					

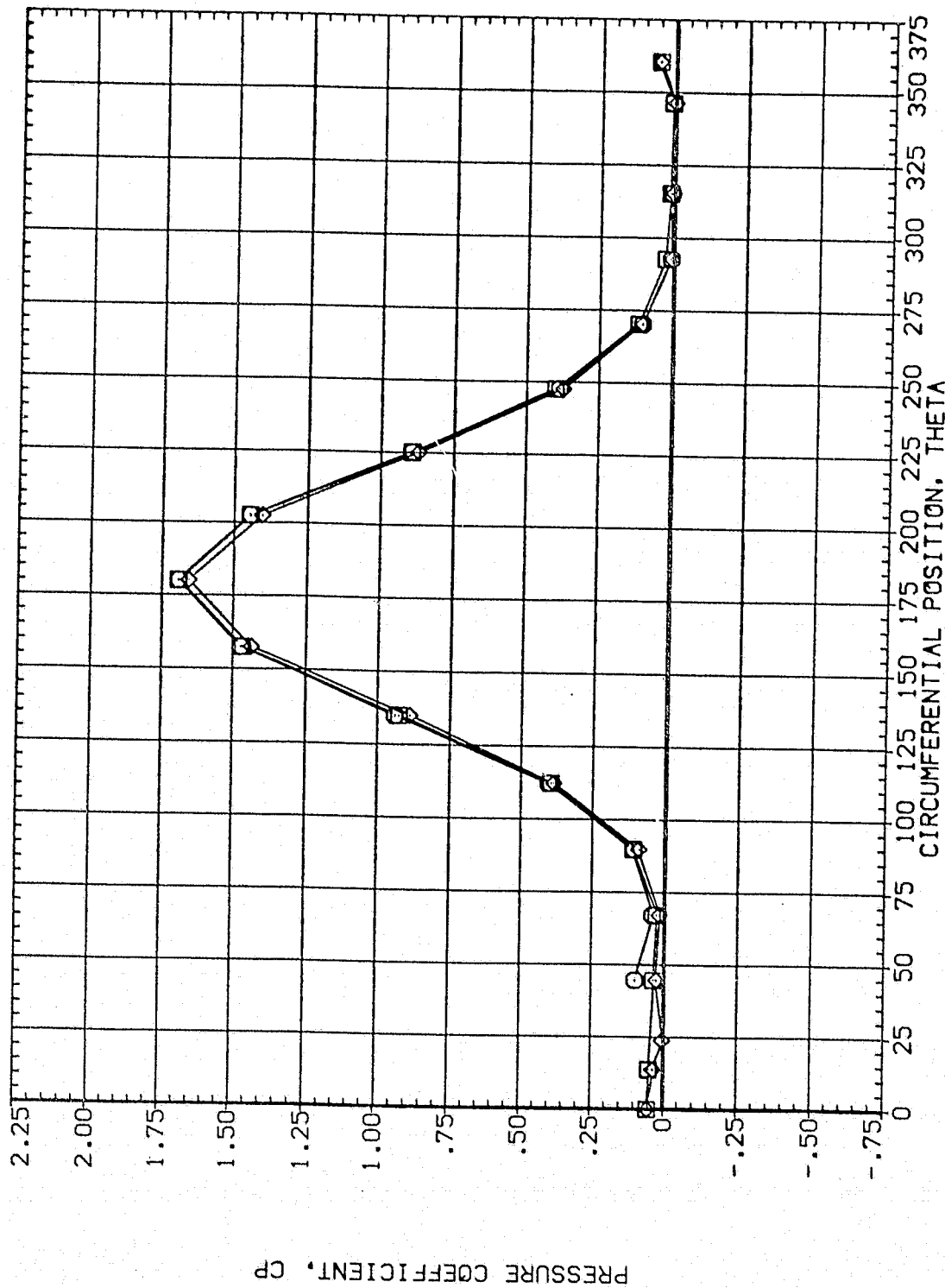


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.892	77.880	4.960	MOUNT	.000 OFFSET
□	.923				2.000 PHI
◇	.954				80.000

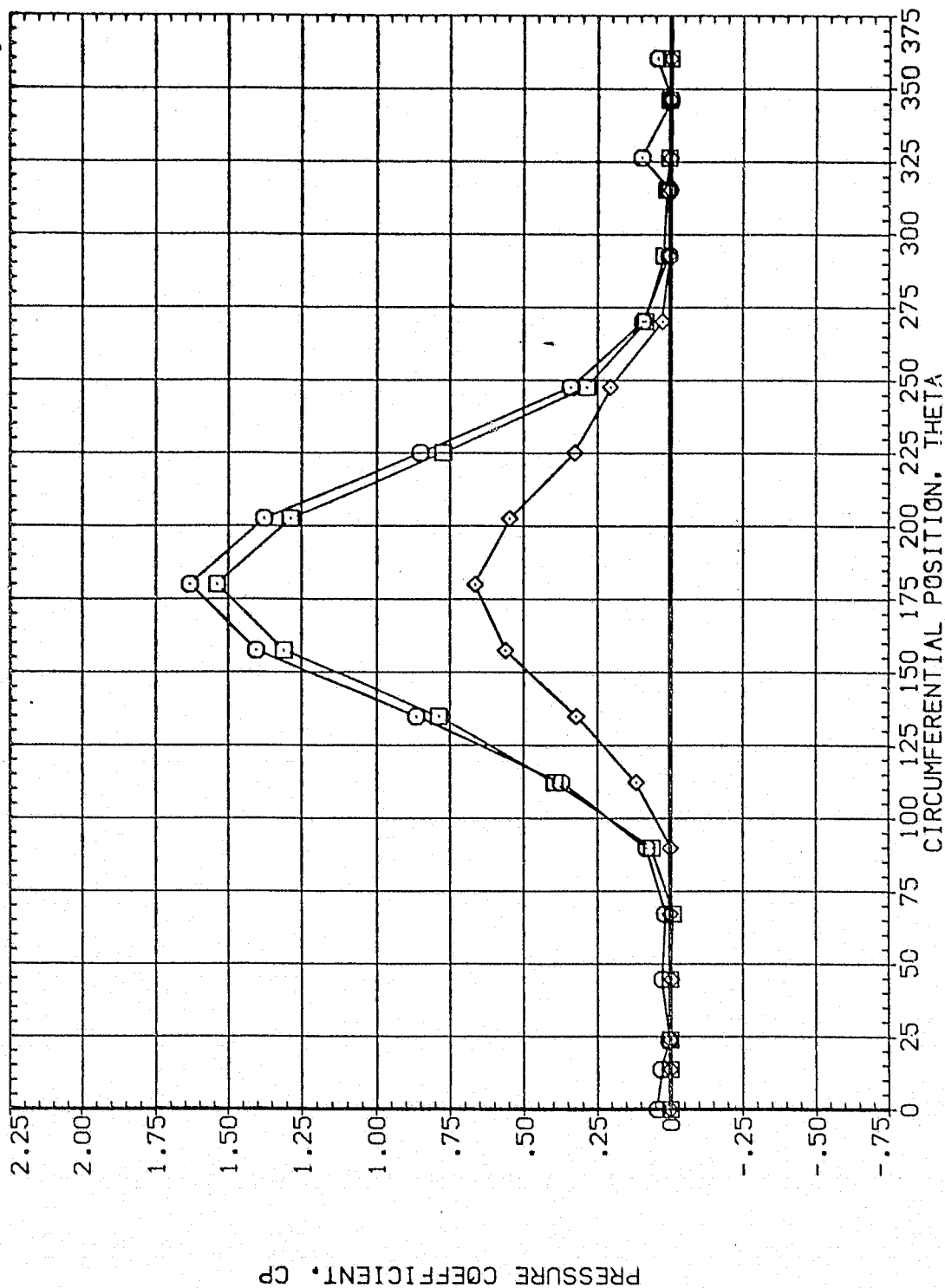


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (1A-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET 90.000
 PHI .000

SYMBOL X/LB ALPHA MACH
 .055 79.930 4.960
 .108
 .162

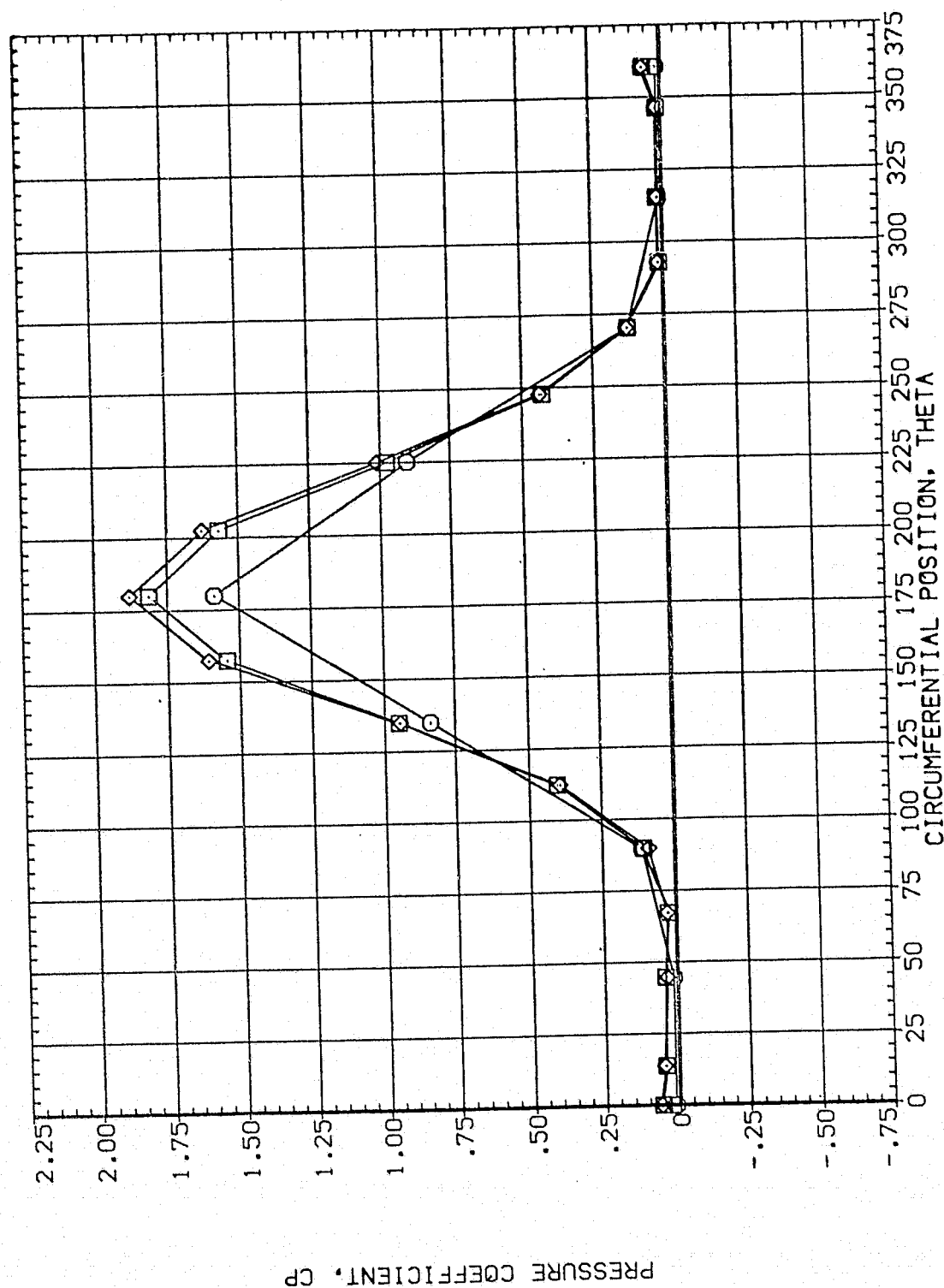


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2645

(P1A072)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL X/LB ALPHA MACH
□ .216 79.930 4.960
◇ .322
◇ .518

PARAMETRIC VALUES
BETA .000
HOUNT 2.000
OFFSET PHI 90.000
PHI .000

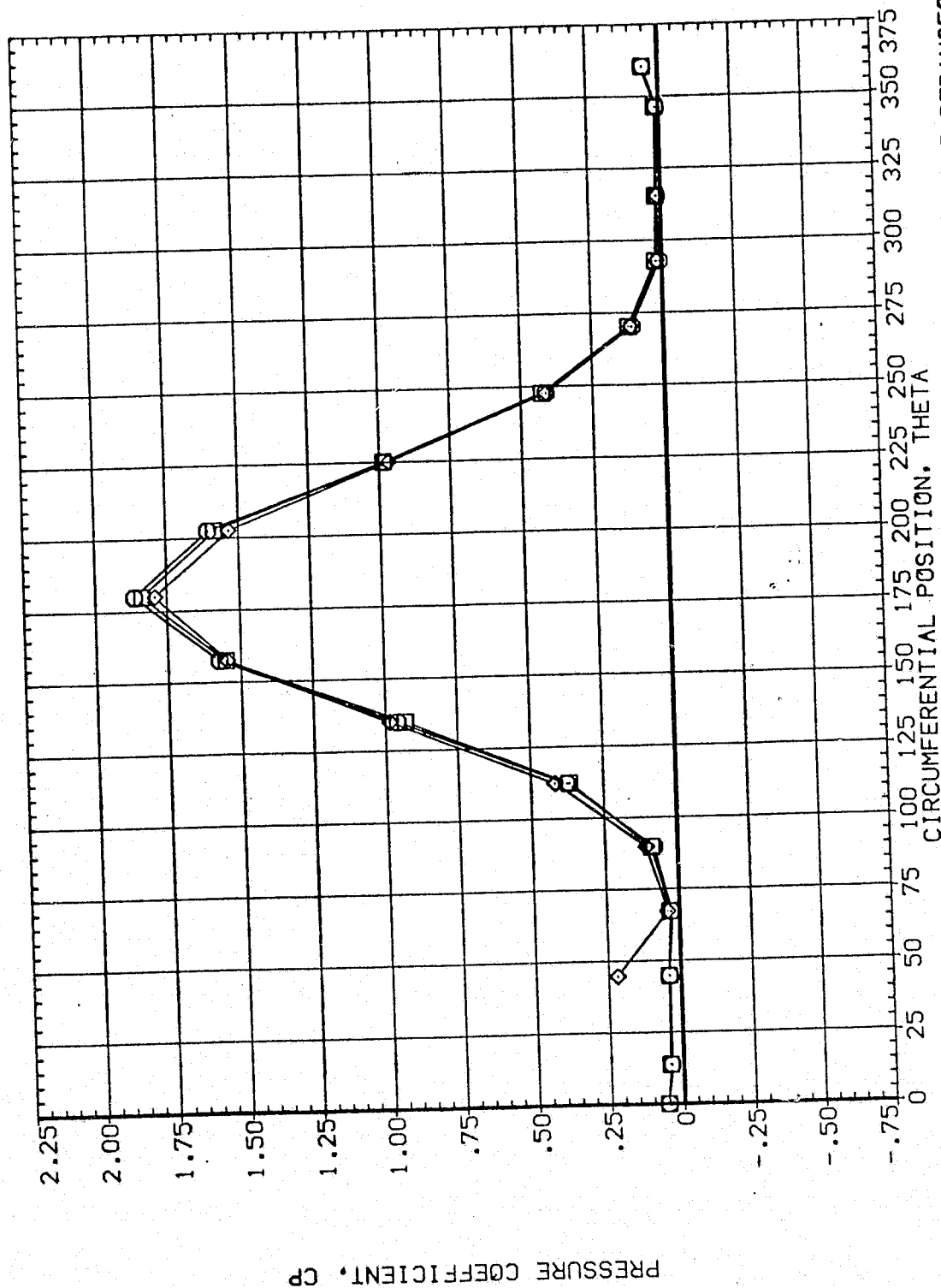


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A072)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
				MOUNT	PHI	.000
	.610	79.930	4.960			
	.735					
	.860					

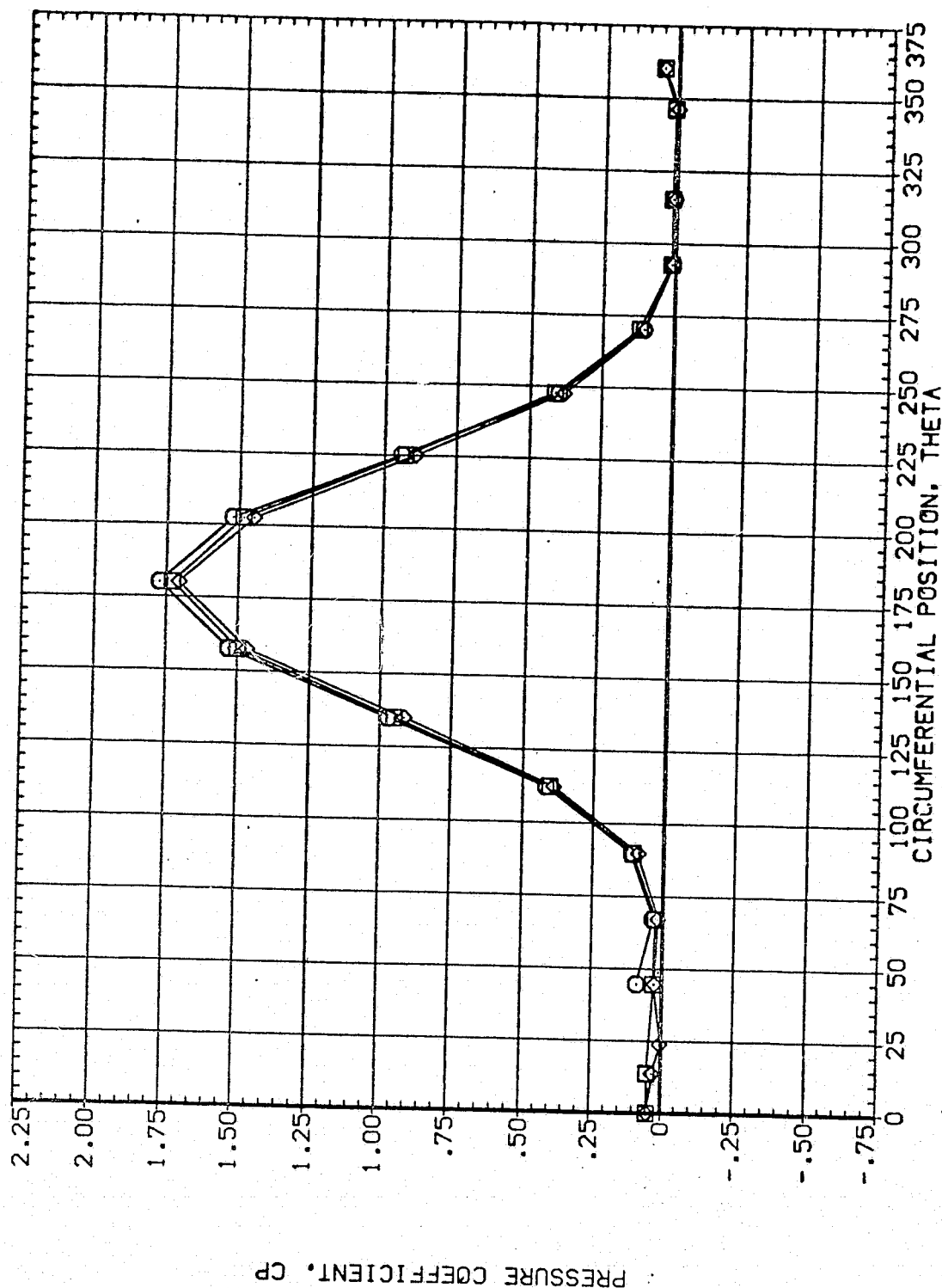


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL
 X/LB
 .892
 .923
 .954

ALPHA
 79.930

MACH
 4.960

BETA
 MOUNT

PARAMETRIC VALUES
 .000
 2.000
 .000
 PHI

90.000
 .000

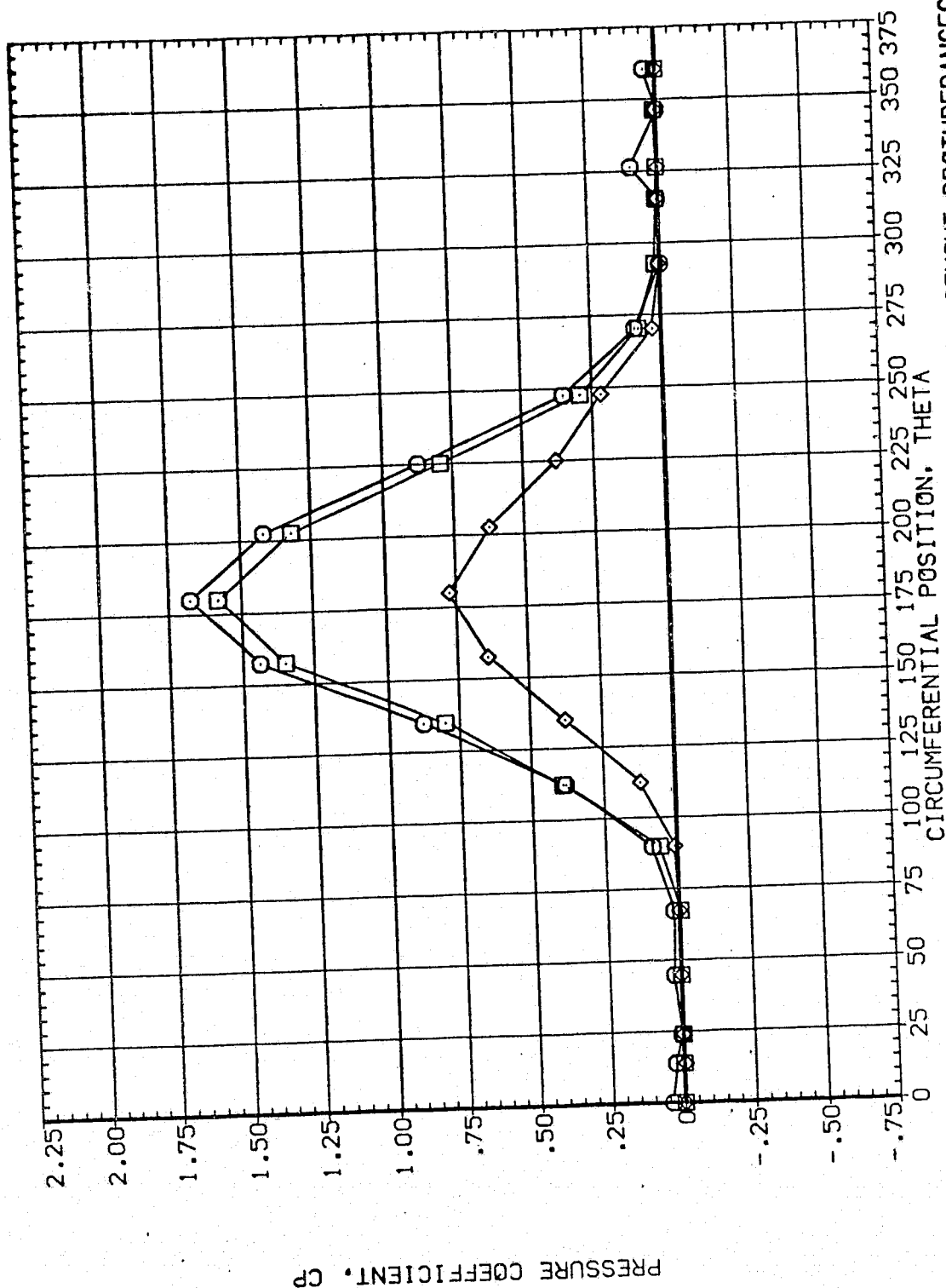


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - 12 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
◇	.055	81.830	4.960	2.000	.000	.000
□	.108					
◇	.162					

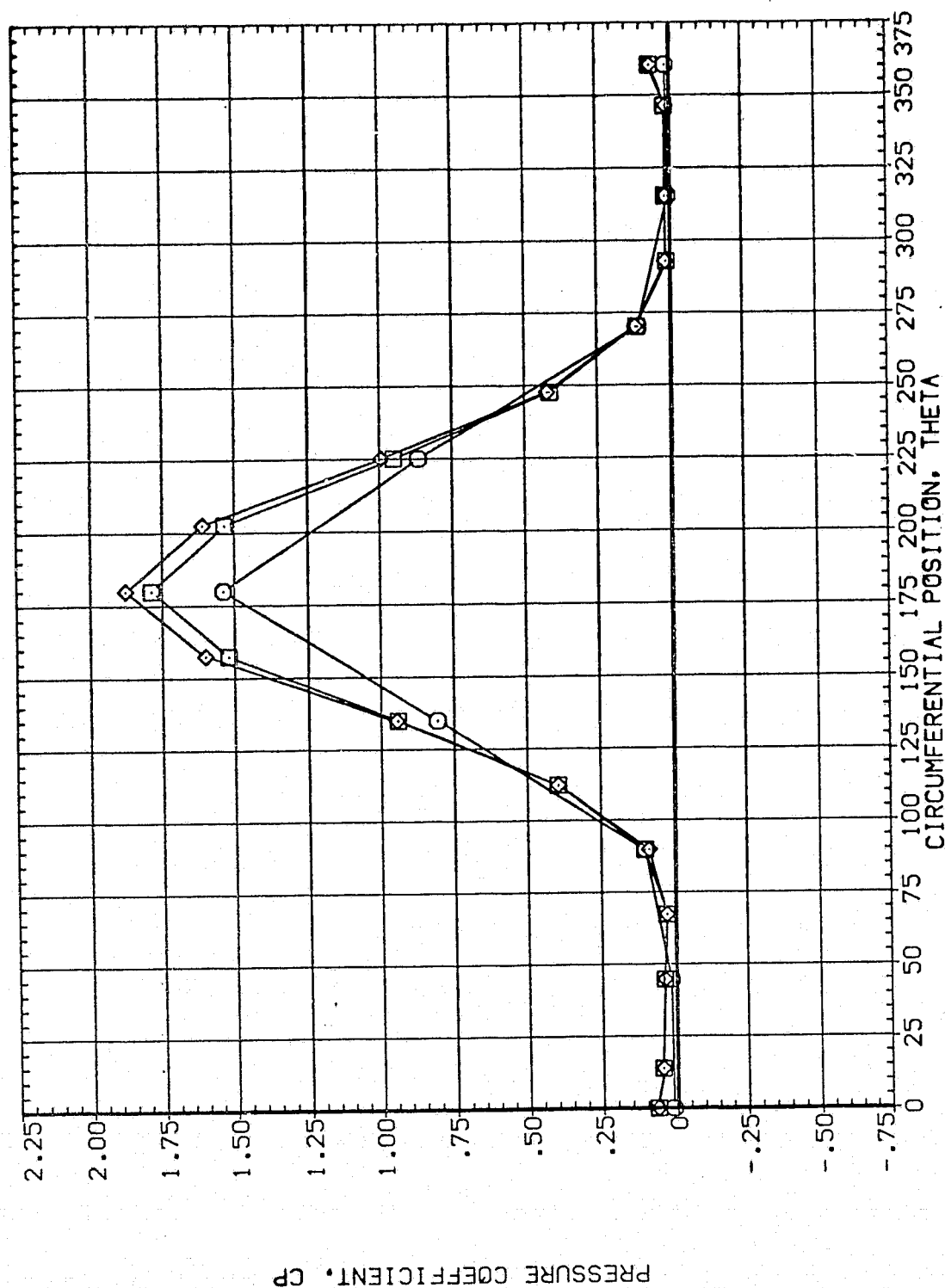


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTRUDANCES

SYMBOL X/LB ALPHA MACH
 □ .216 81.830 4.960
 ◇ .322
 ◇ .518

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

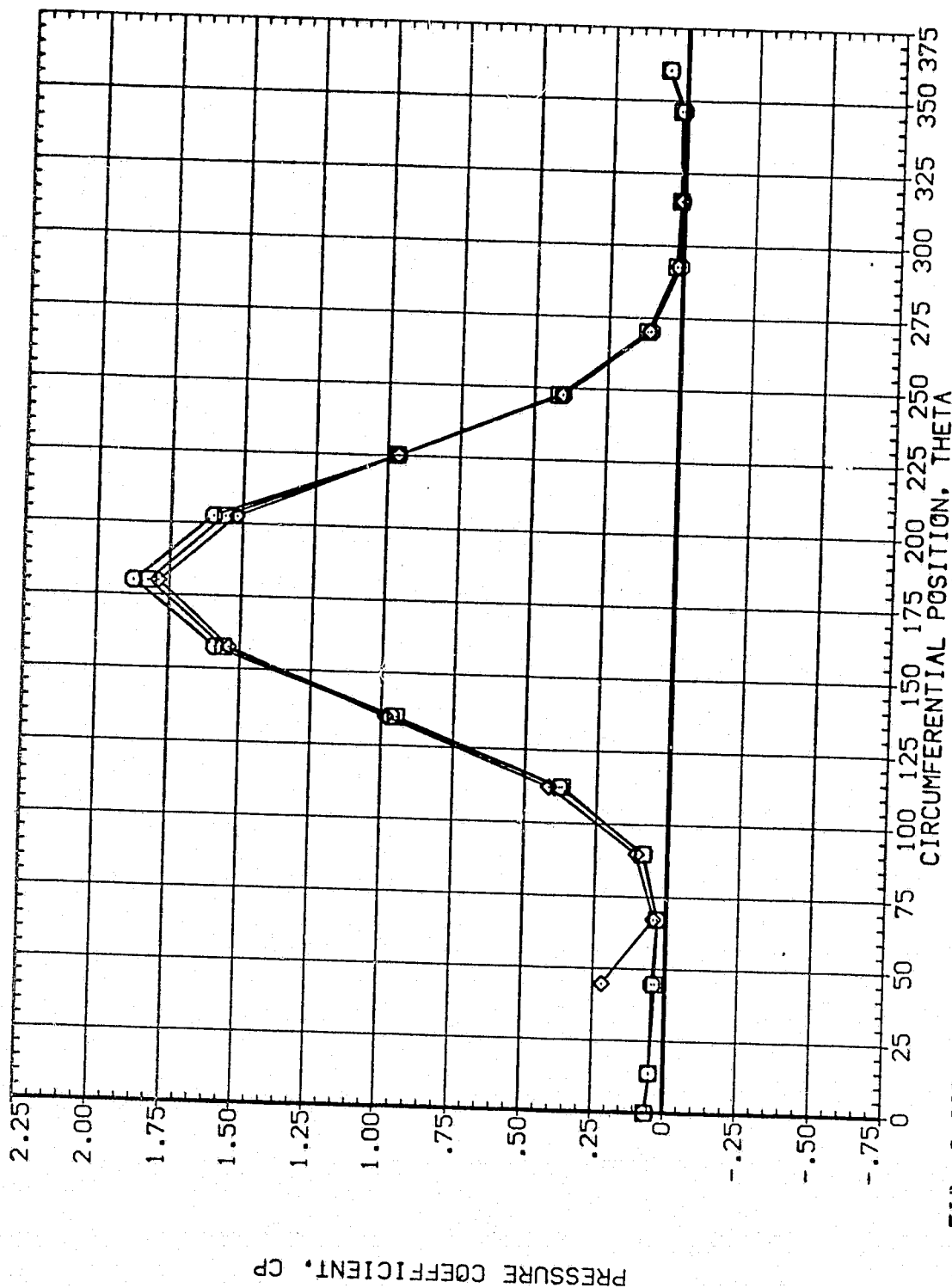


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2650

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A073)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.610	81.830	4.960	MOUNT	.000	50.000
□	.735				2.000	
◇	.860					.000

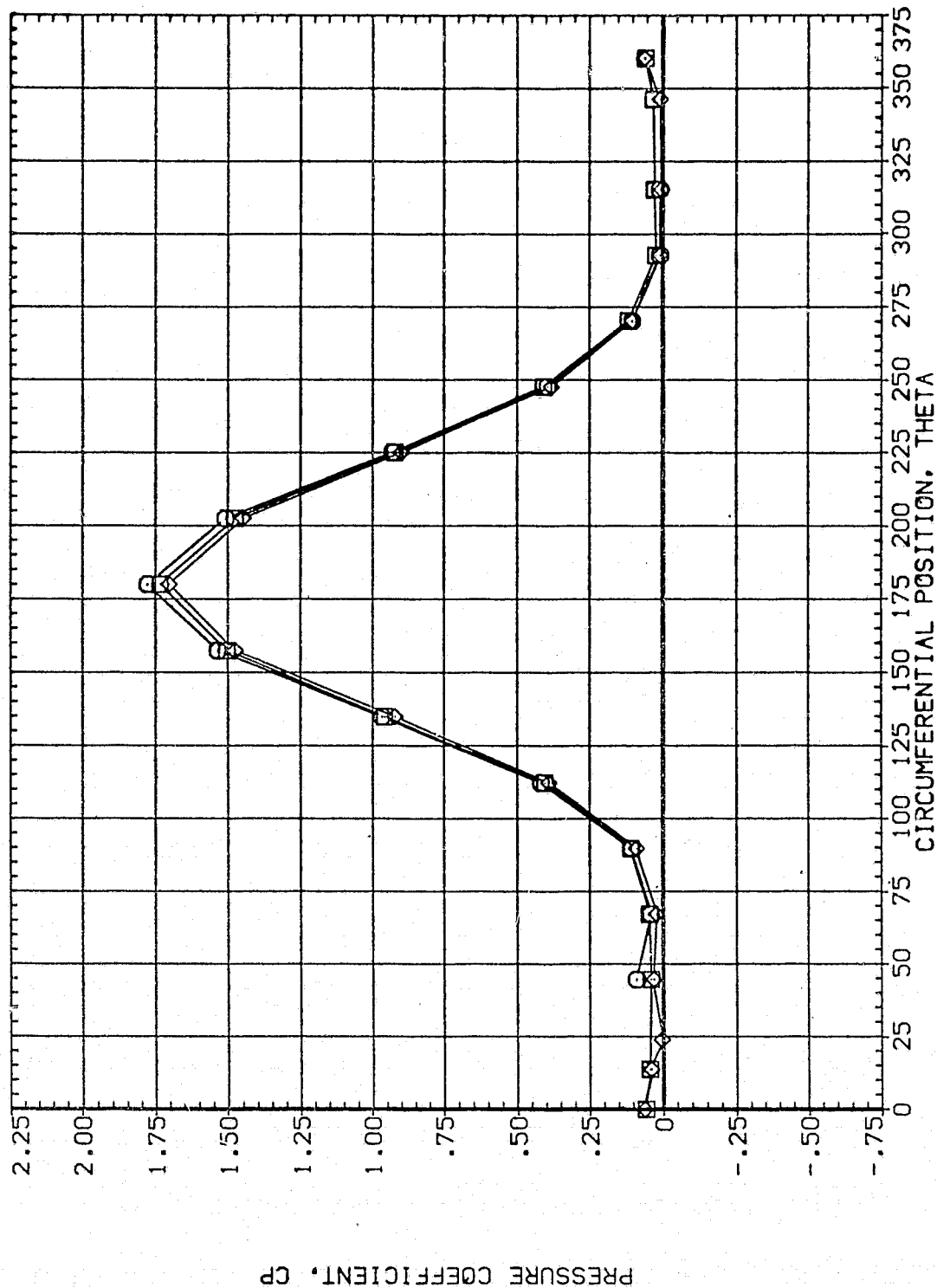


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SVISOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.892	81.830	4.960	MOUNT	.000 OFFSET
□	.923				2.000 PHI
◇	.954				.000

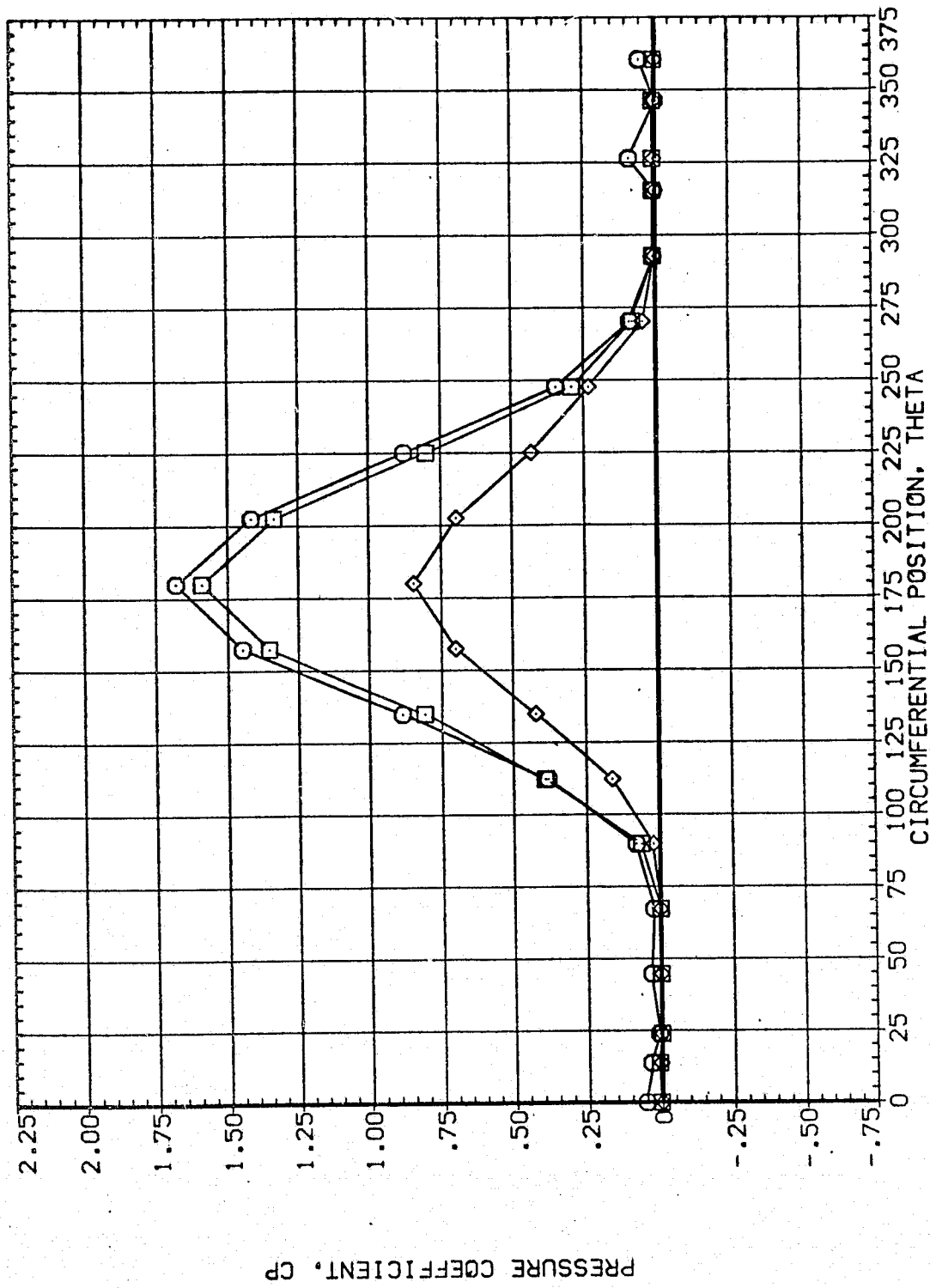


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL X/LB
 ○ .055
 □ .108
 ◇ .162

ALPHA 84.830
 MACH 4.960

PARAMETRIC VALUES
 BETA .000
 MOUNT 2.000
 OFFSET PHI 90.000
 .000

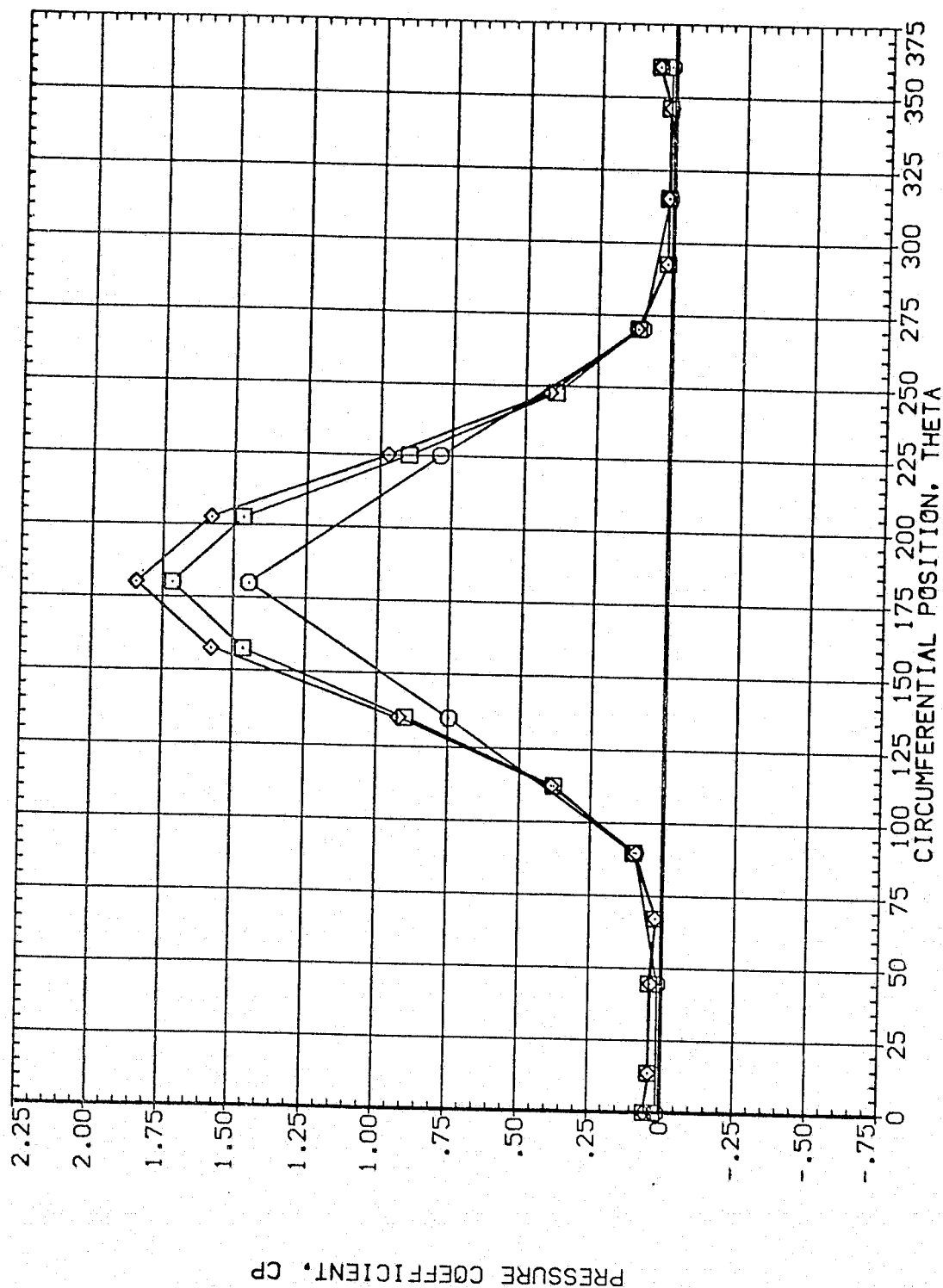


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.216	84.830	4.960	MOUNT	.000	.000
◇	.322					
◇	.518					

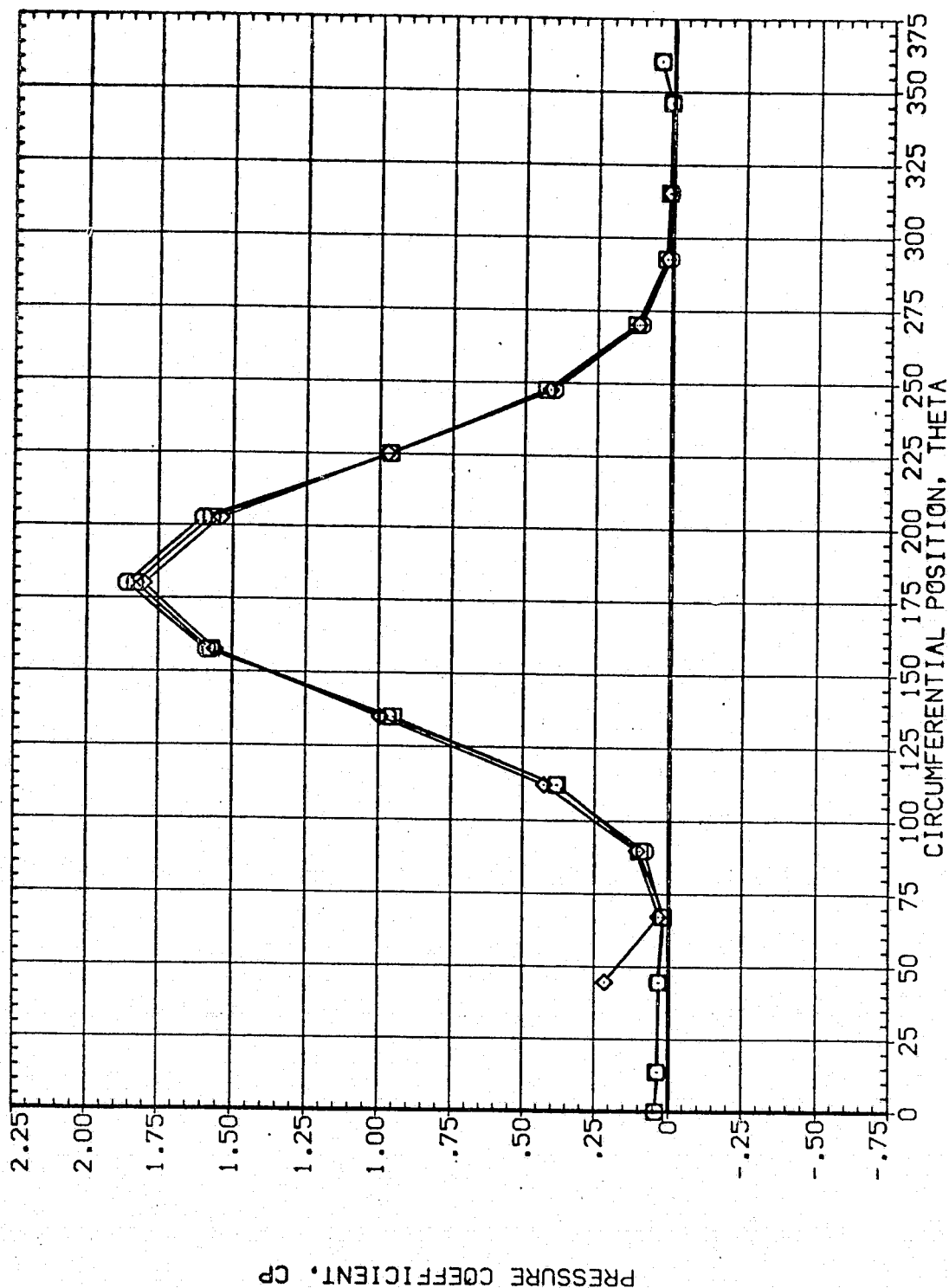


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A074)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
○	.610	84.830	4.960	HOUNT	2.000	PHI
◇	.735					.000
◇	.860					

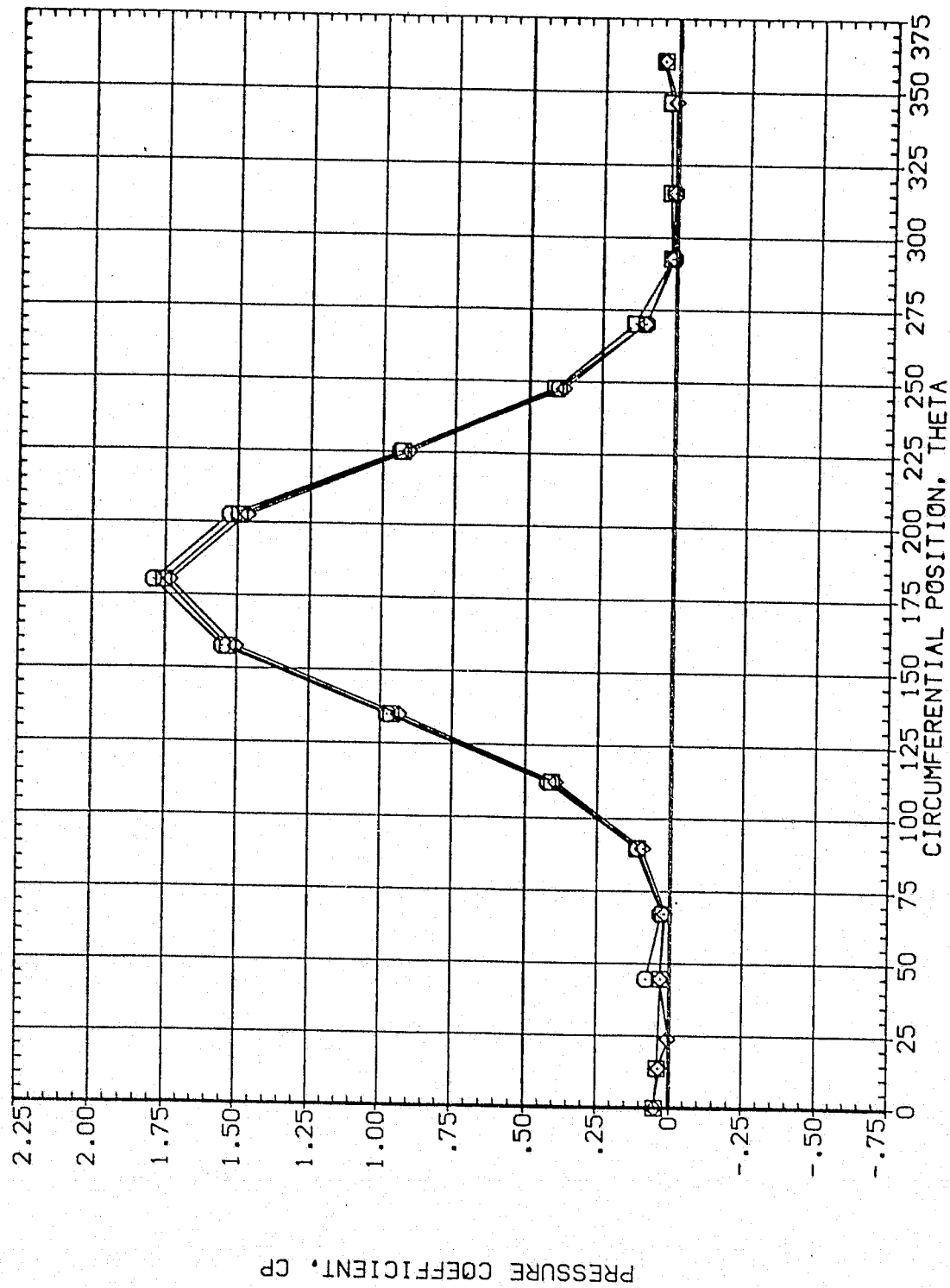


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL
 ○
 □
 ◇

X/LB .892
 .923
 .954

ALPHA 84.830

MACH 4.960

BETA
 MOUNT

PARAMETRIC VALUES
 .000 .000
 2.000 PHI 90.000

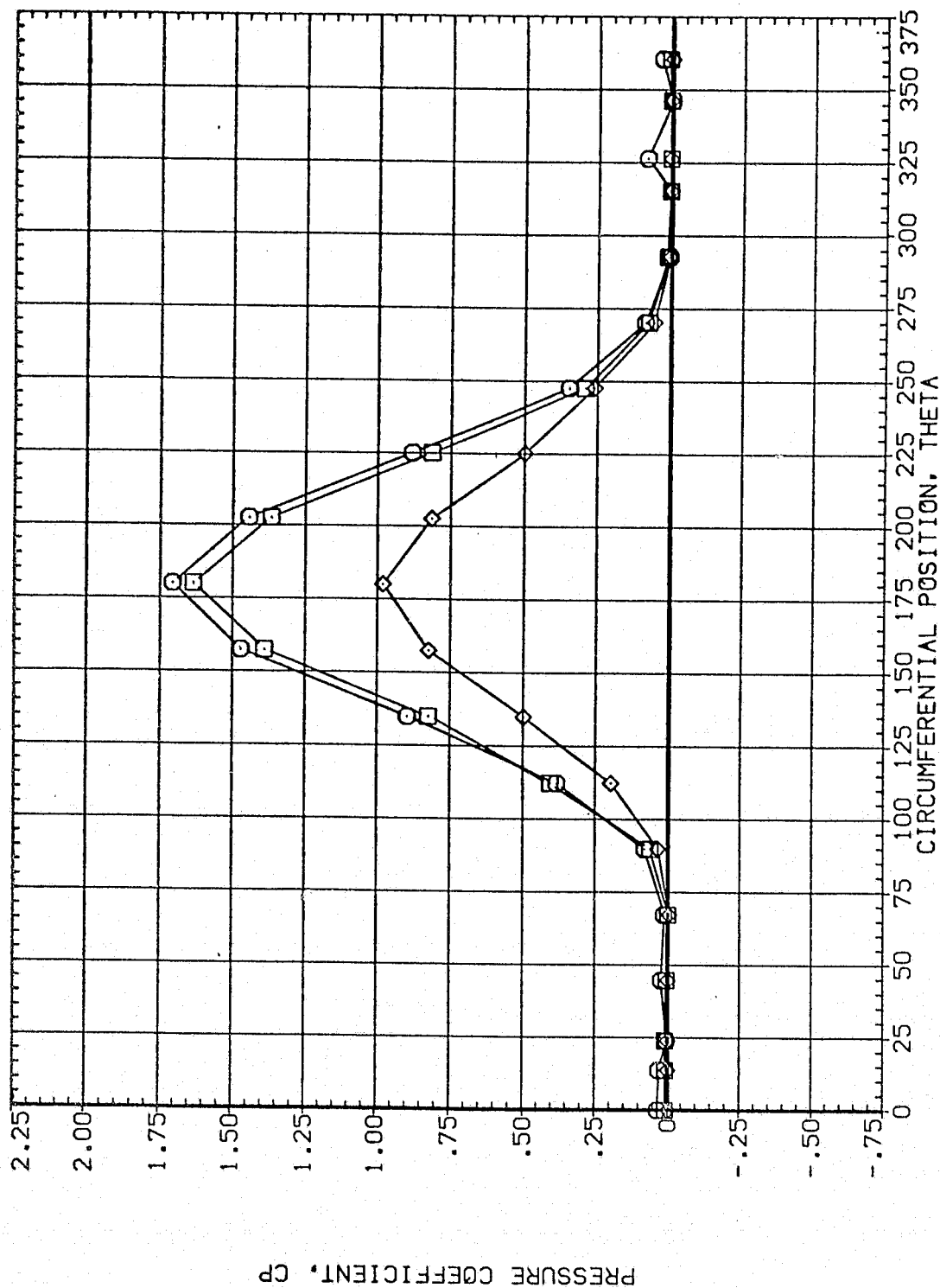


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL X/LB ALPHA MACH
 O .055 87.830 4.960
 □ .108
 ◇ .162

PARAMETRIC VALUES
 BETA .000
 HOUNT 2.000
 OFFSET 90.000
 PHI .000

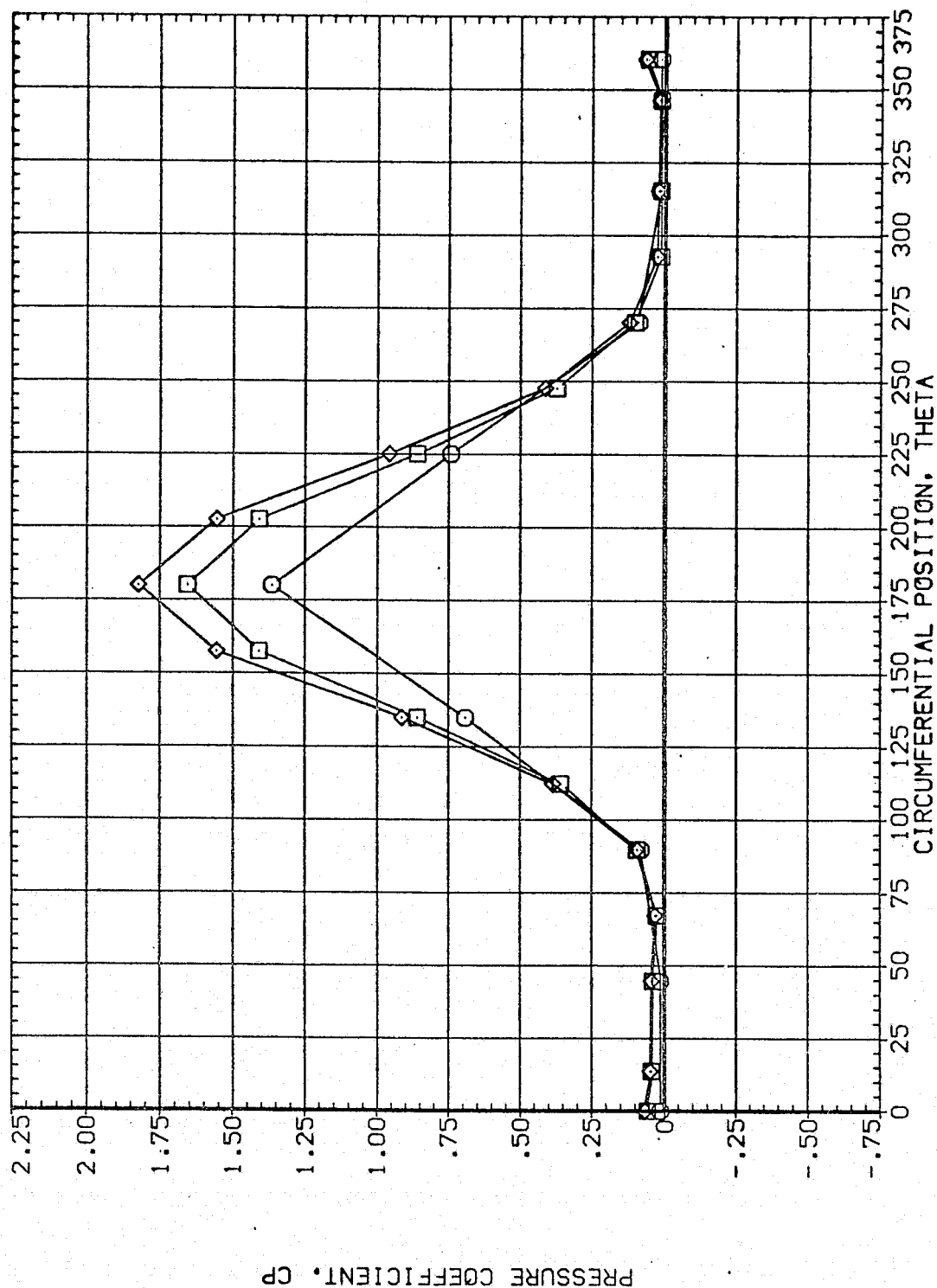


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
				HOUNT	PHI	.000
	.216	87.830	4.960			
	.322					
	.518					

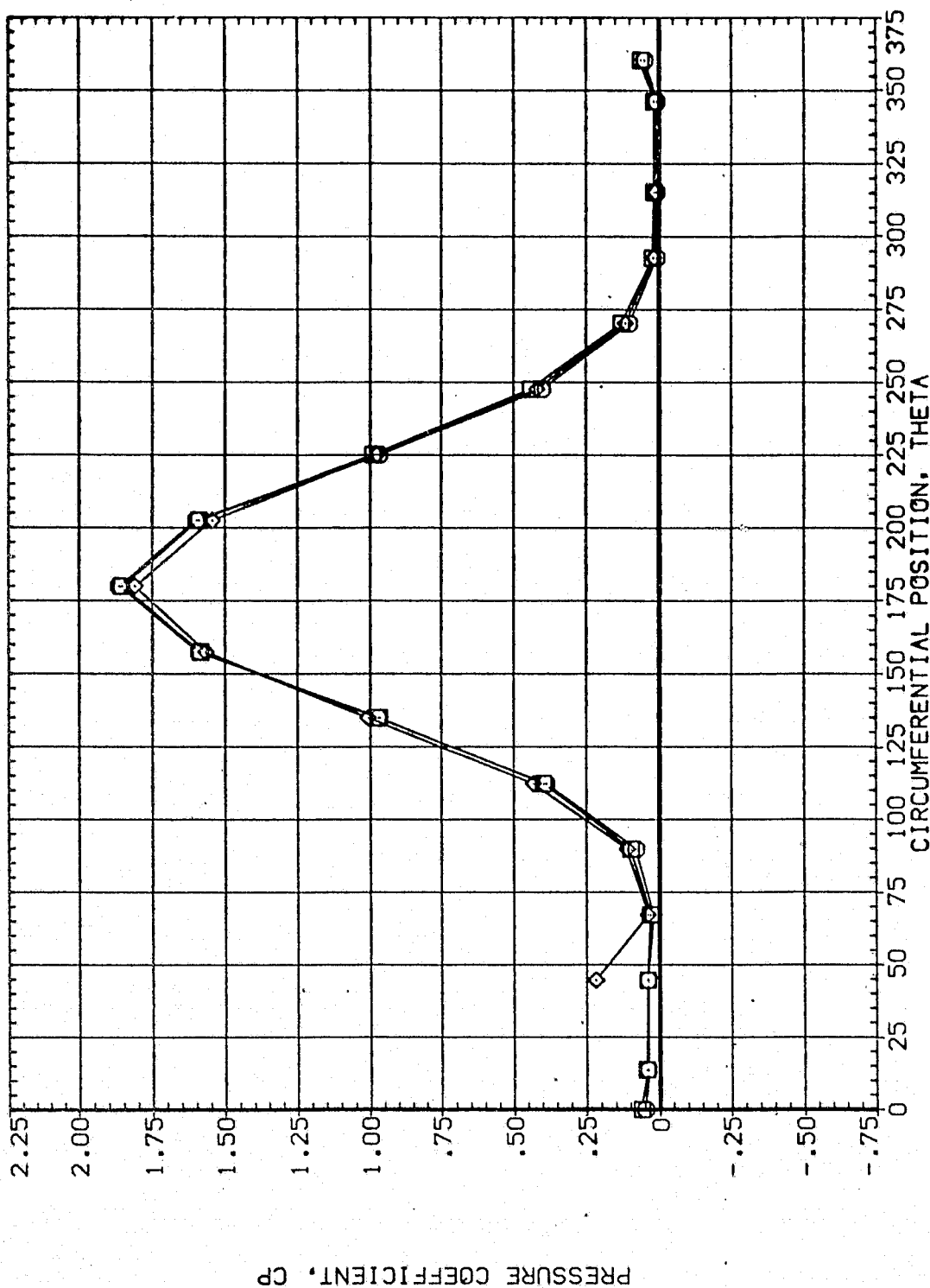


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	X/LB	ALPHA	HACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.610	87.830	4.960	2.000	.000	90.000
◇	.735					.000
	.860					

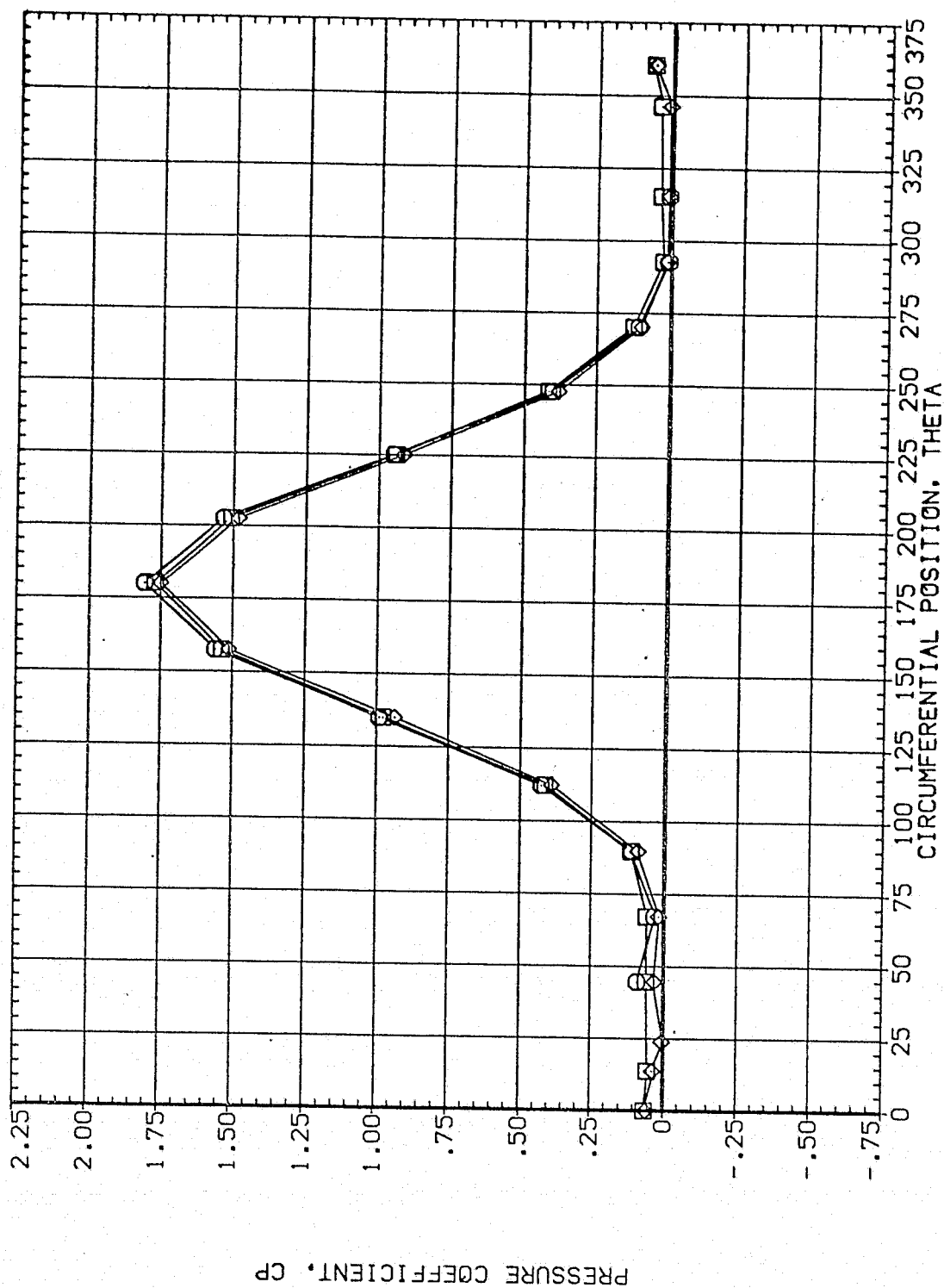


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A075)

SYMBOL	X/LB	ALPHA	HACH	BETA	PARAMETRIC VALUES
□	.892	87.830	4.960	MOUNT	.000
◇	.923			PHI	2.000
	.954				90.000
					.000

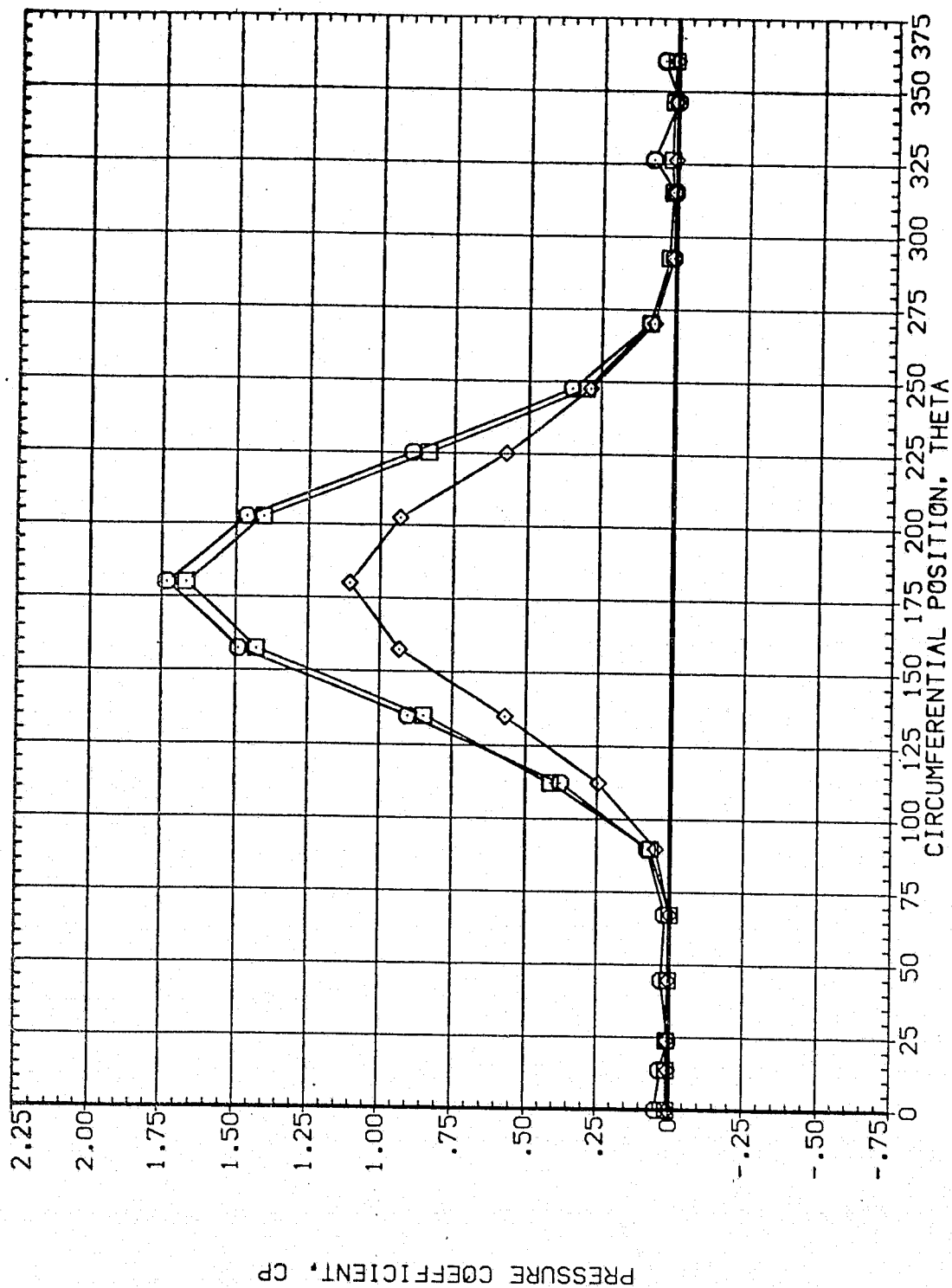


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A076)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	89.830	4.960	2.000	.000	.000
□	.108					
◇	.162					

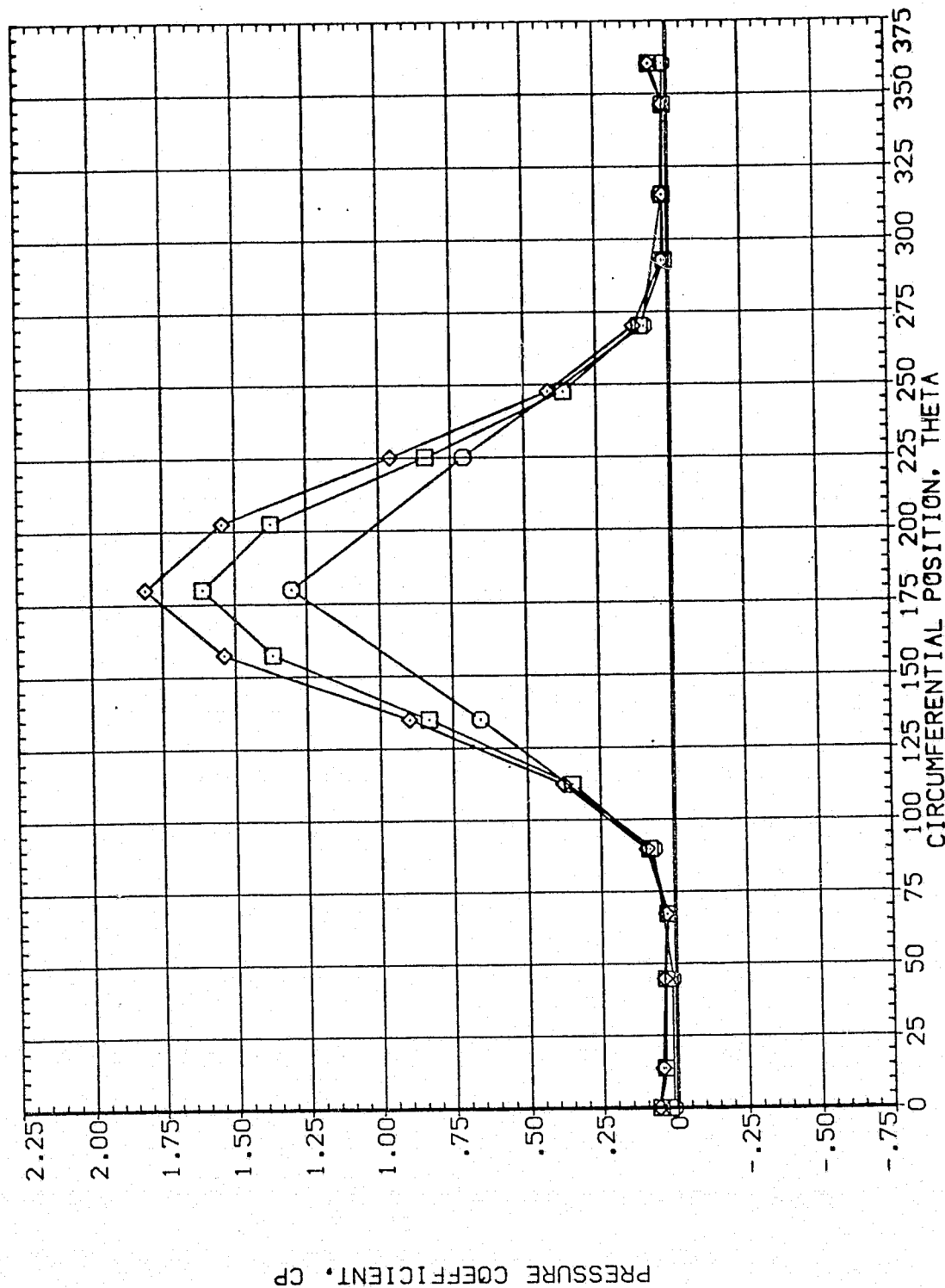


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

PARAMETRIC VALUES
BETA .000
HOUNT 2.000
OFFSET PHI .000
90.000

SYMBOL X/LB ALPHA MACH
□ .216 89.830 4.960
□ .322
◇ .518

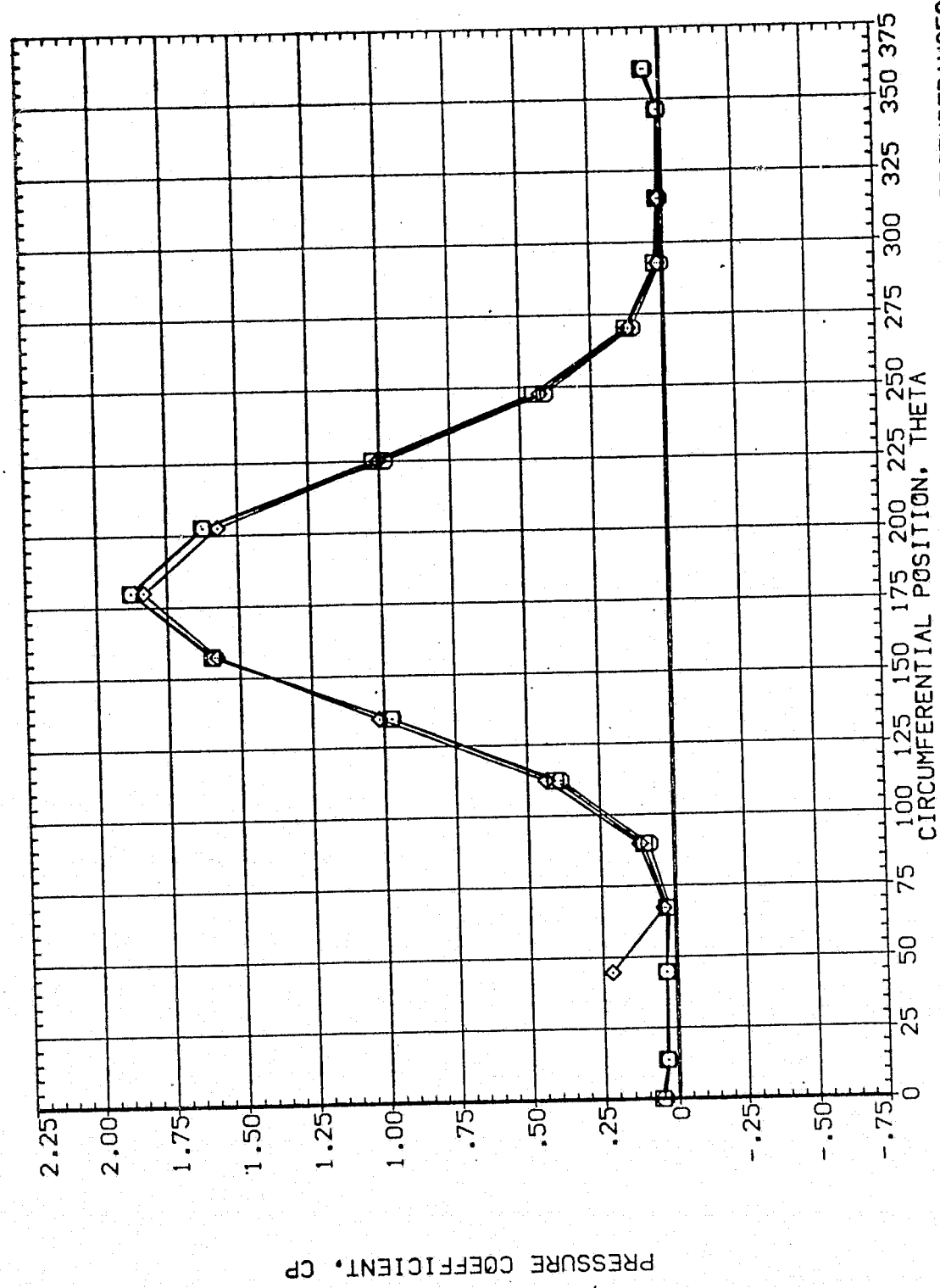


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2662

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

SYMBOL

X/LB

ALPHA

MACH

(P1A076)

BETA
MOUNT

PARAMETRIC VALUES
.000
2.000

PHI

90.000
.000

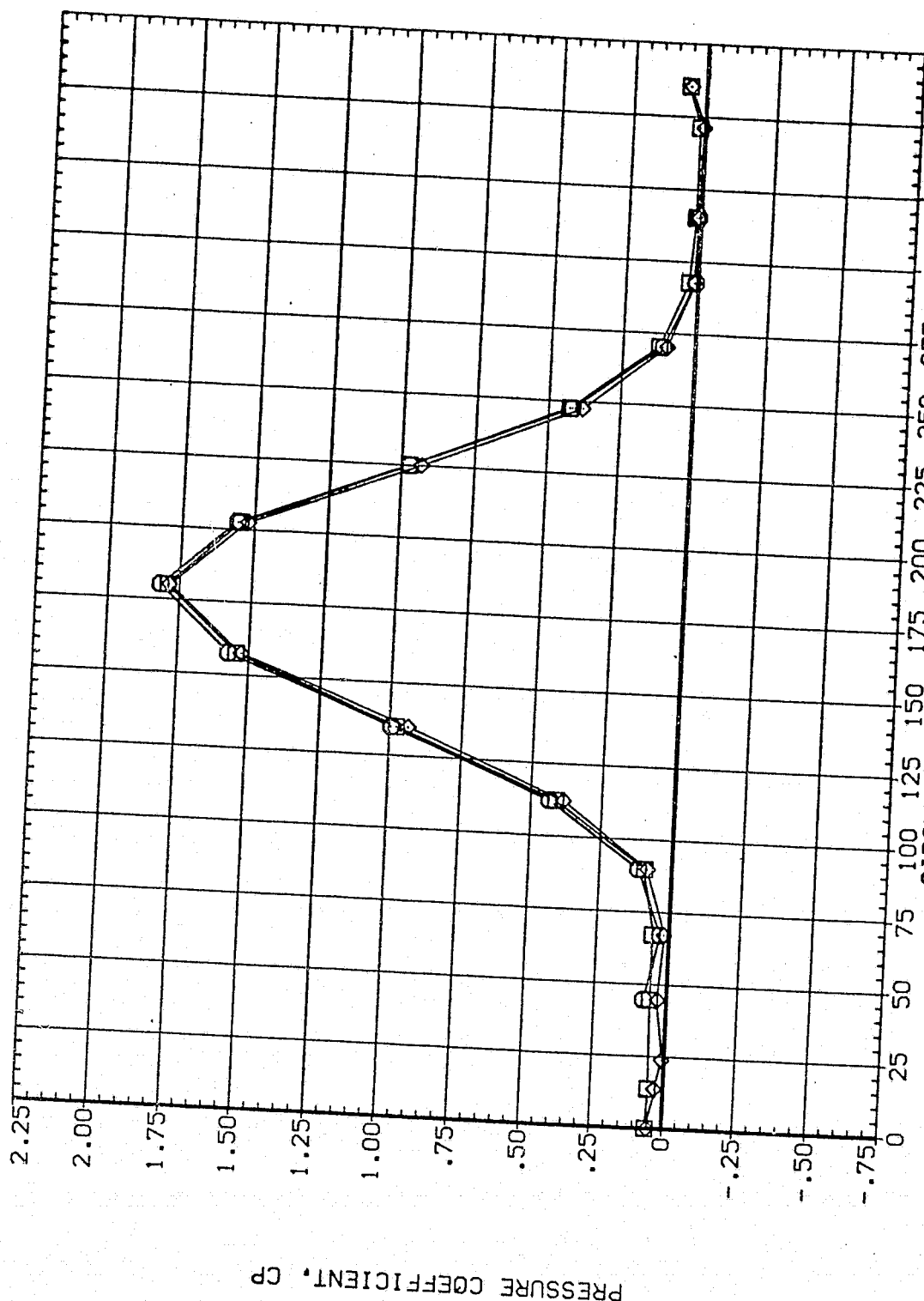


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL
□
◇

X/LB .892
.923
.954
ALPHA 89.830
MACH 4.960

PARAMETRIC VALUES
BETA .000
MOUNT 2.000
OFFSET PHI .000

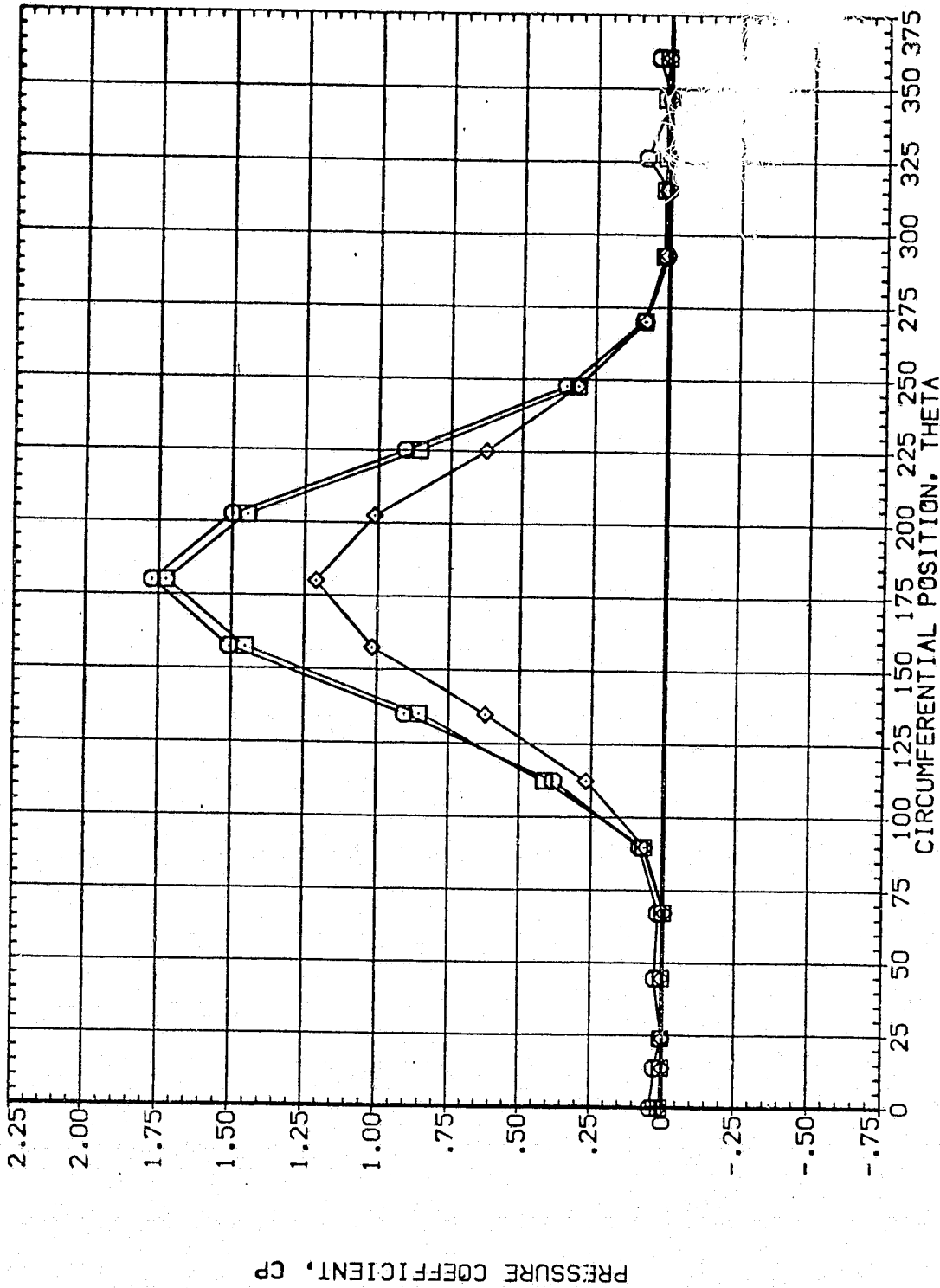


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	91.850	4.960	HOUNT	.000	90.000
□	.108				2.000	.000
◇	.162					

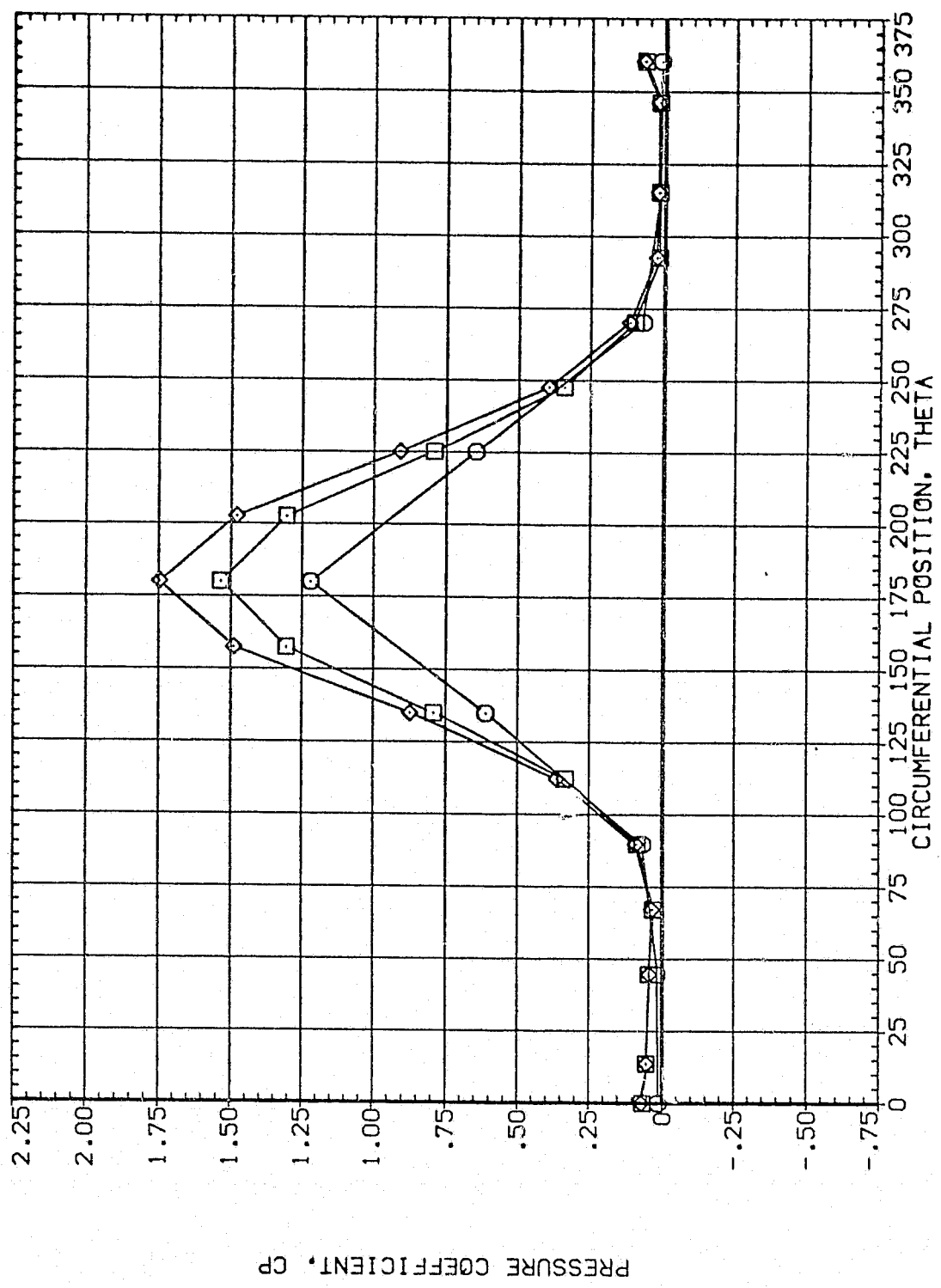


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

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SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	.216	91.850	4.960	MOUNT	.000
◇	.322			PHI	.000
	.518				

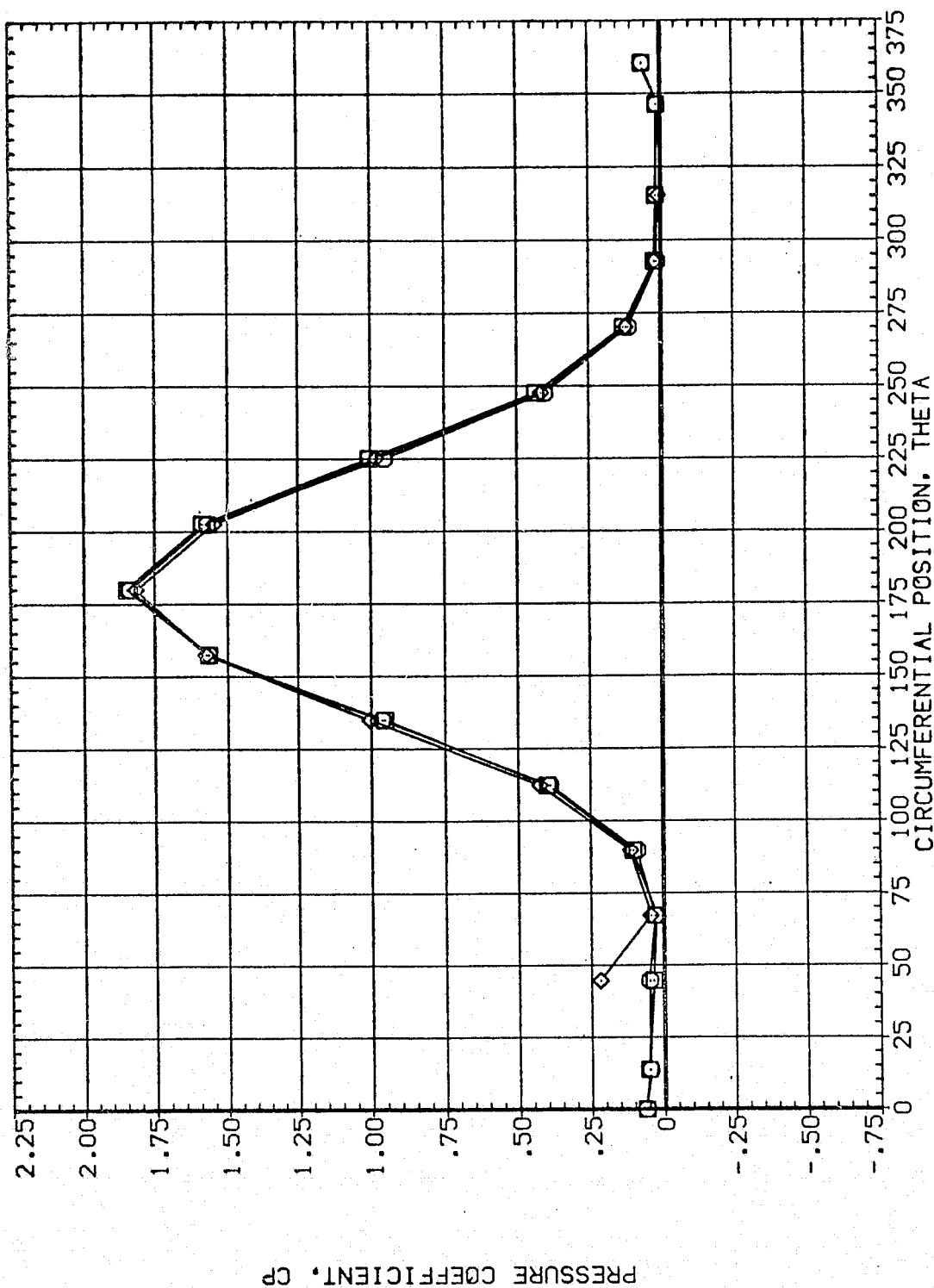


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A077)

SYMBOL
□
◇

X/LB
.610
.735
.860

ALPHA
91.850

MACH
4.960

PARAMETRIC VALUES
BETA
MOUNT

.000
2.000

OFFSET
PHI

90.000
.000

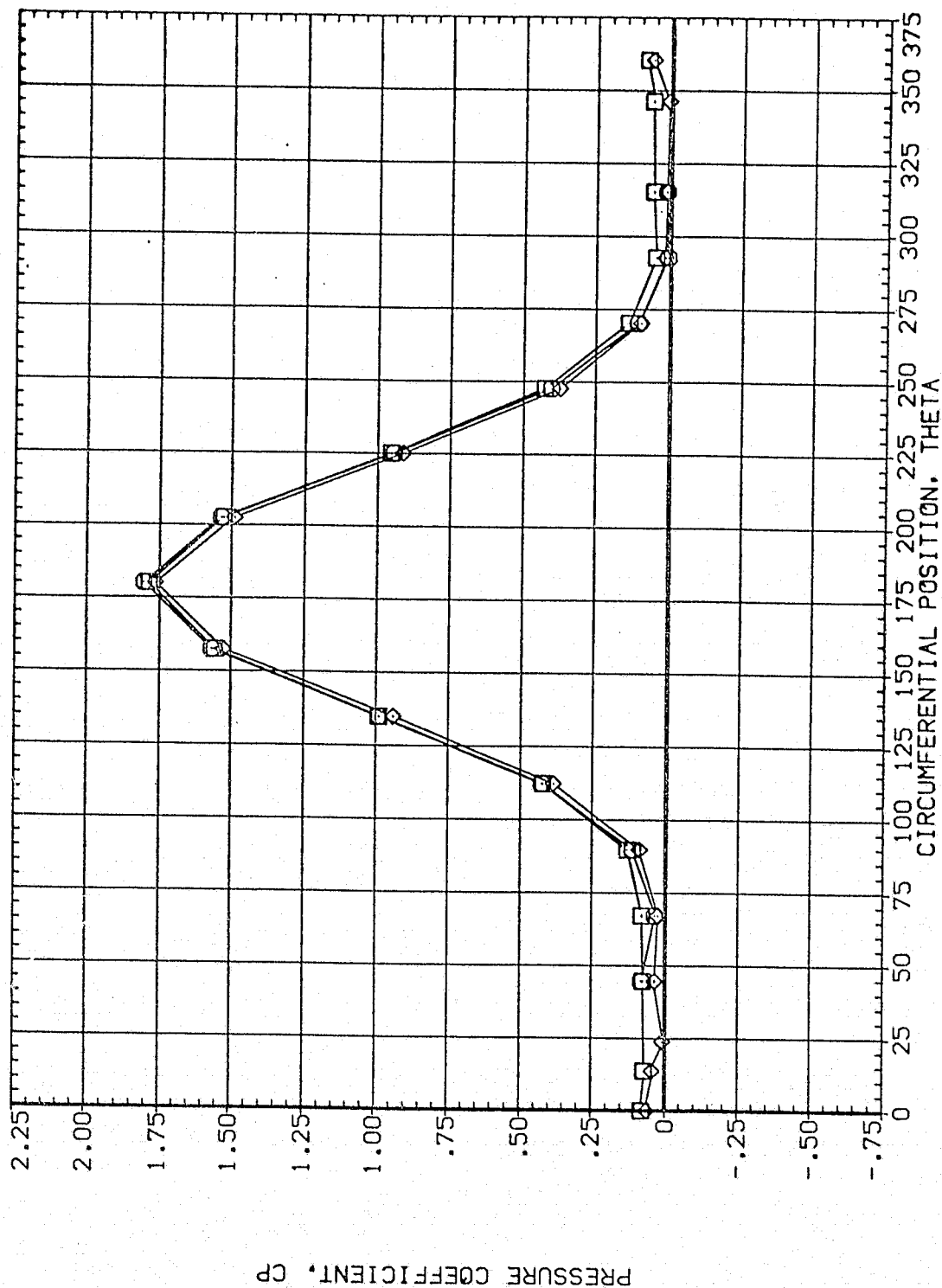


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.892	91.850	4.960	MOUNT	.000 OFFSET
□	.923				2.000 PHI
◇	.954				90.000

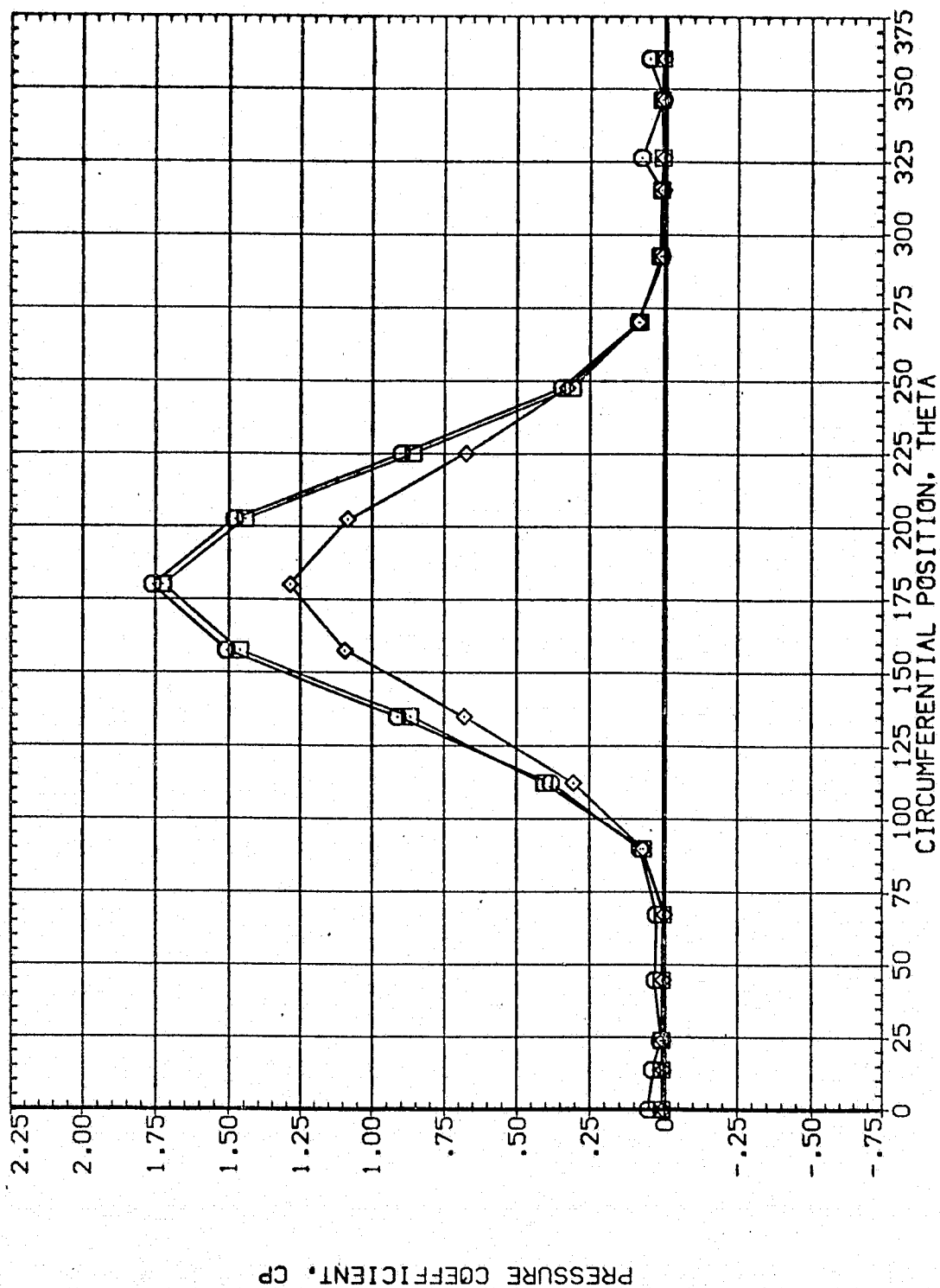


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

PARAMETRIC VALUES
 .000 .000 90.000
 .000 .000 .000
 2.000 PHI

BETA
 HOUNT

SYMBOL X/LB ALPHA HACH
 .055 94.850 4.960
 .108
 .162

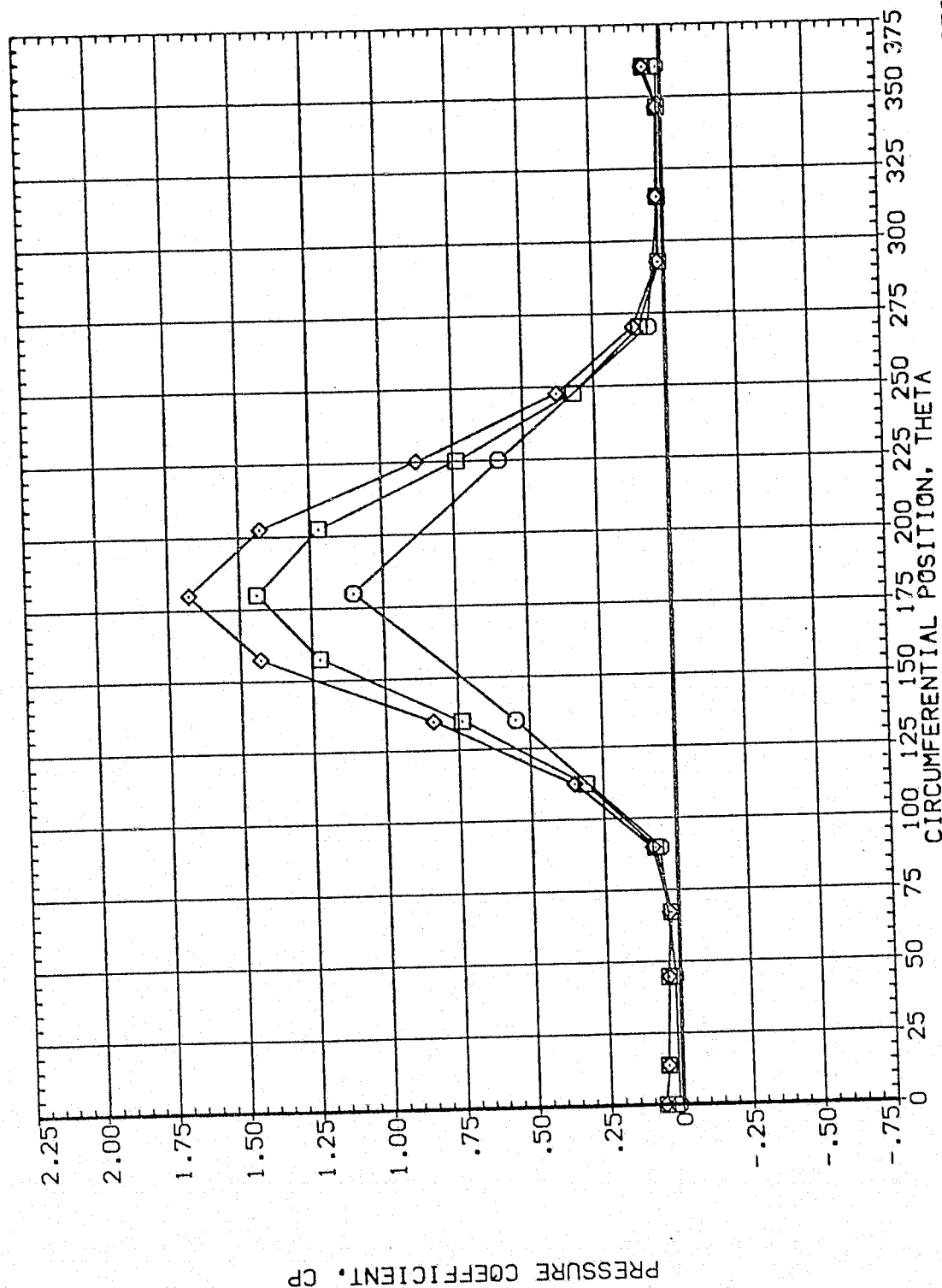


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
 PAGE 2669

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	.216	94.850	4.960	MOUNT	.000 OFFSET
◇	.322				2.000 PHI
◇	.518				50.000

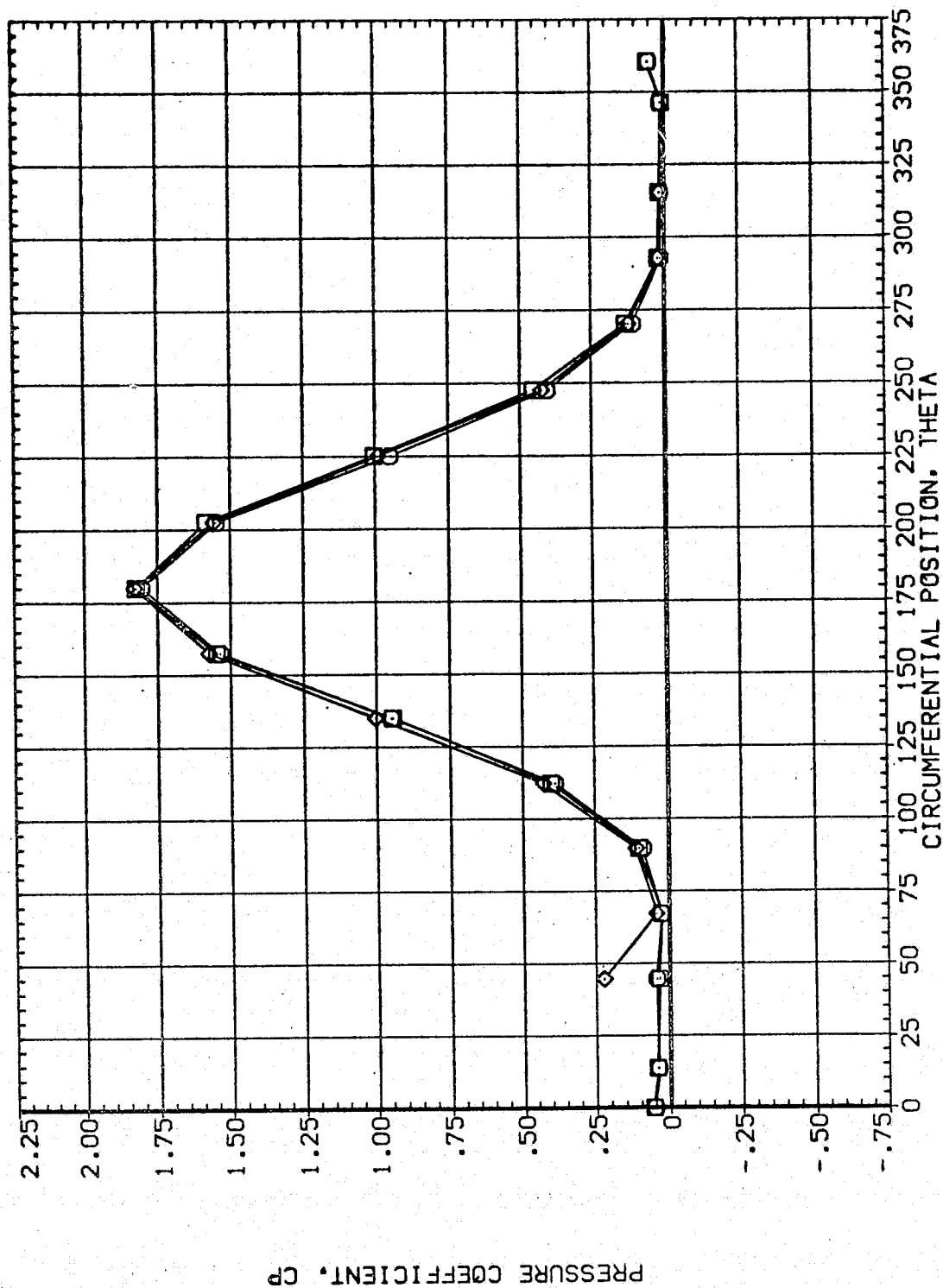


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	90.000
□	.610	94.850	4.960	MOUNT	2.000	PHI
◇	.735					.000
◇	.860					

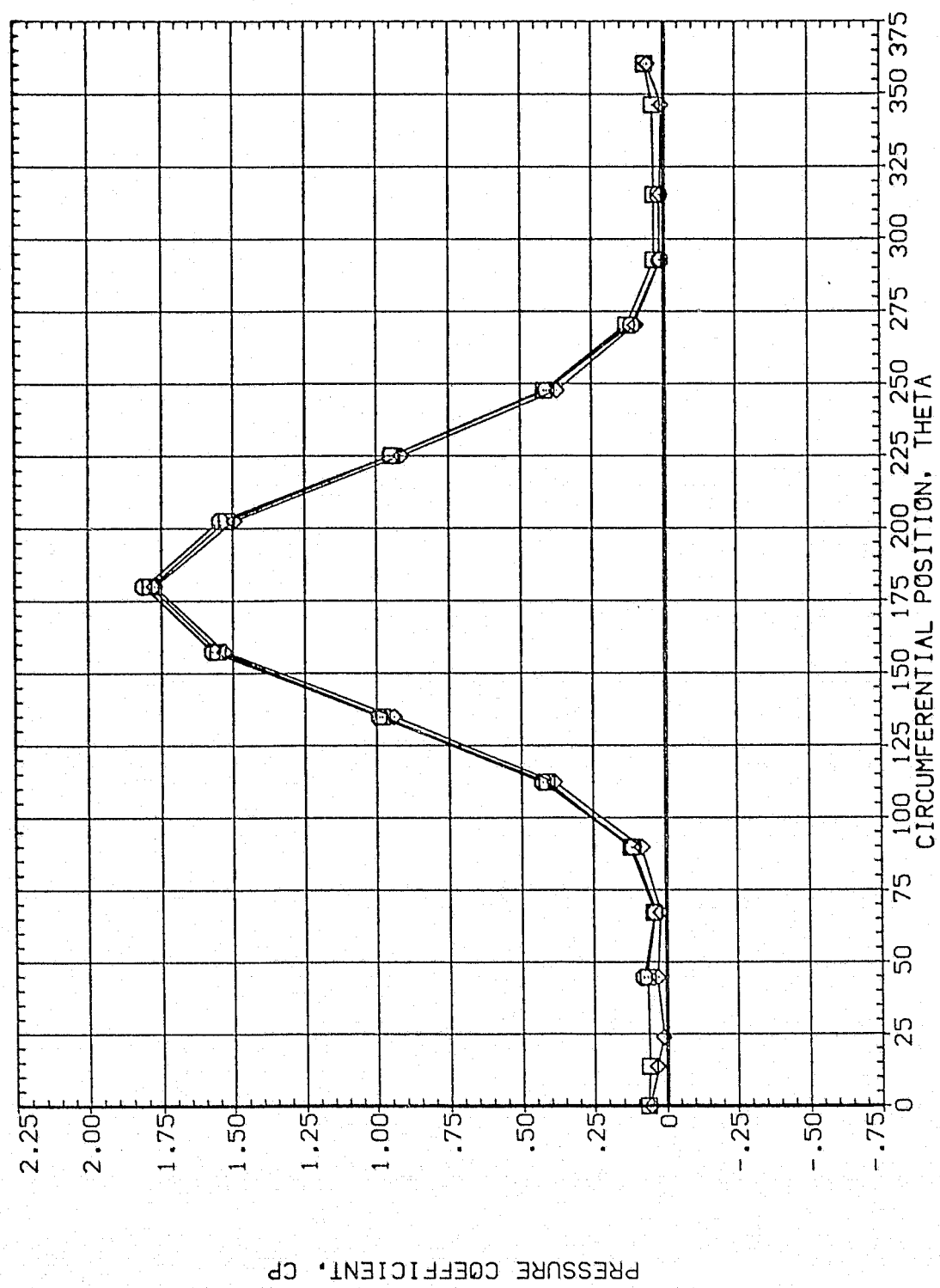


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A078)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.892	34.850	4.960	2.000	.000	90.000
◇	.923			2.000	.000	
	.954					

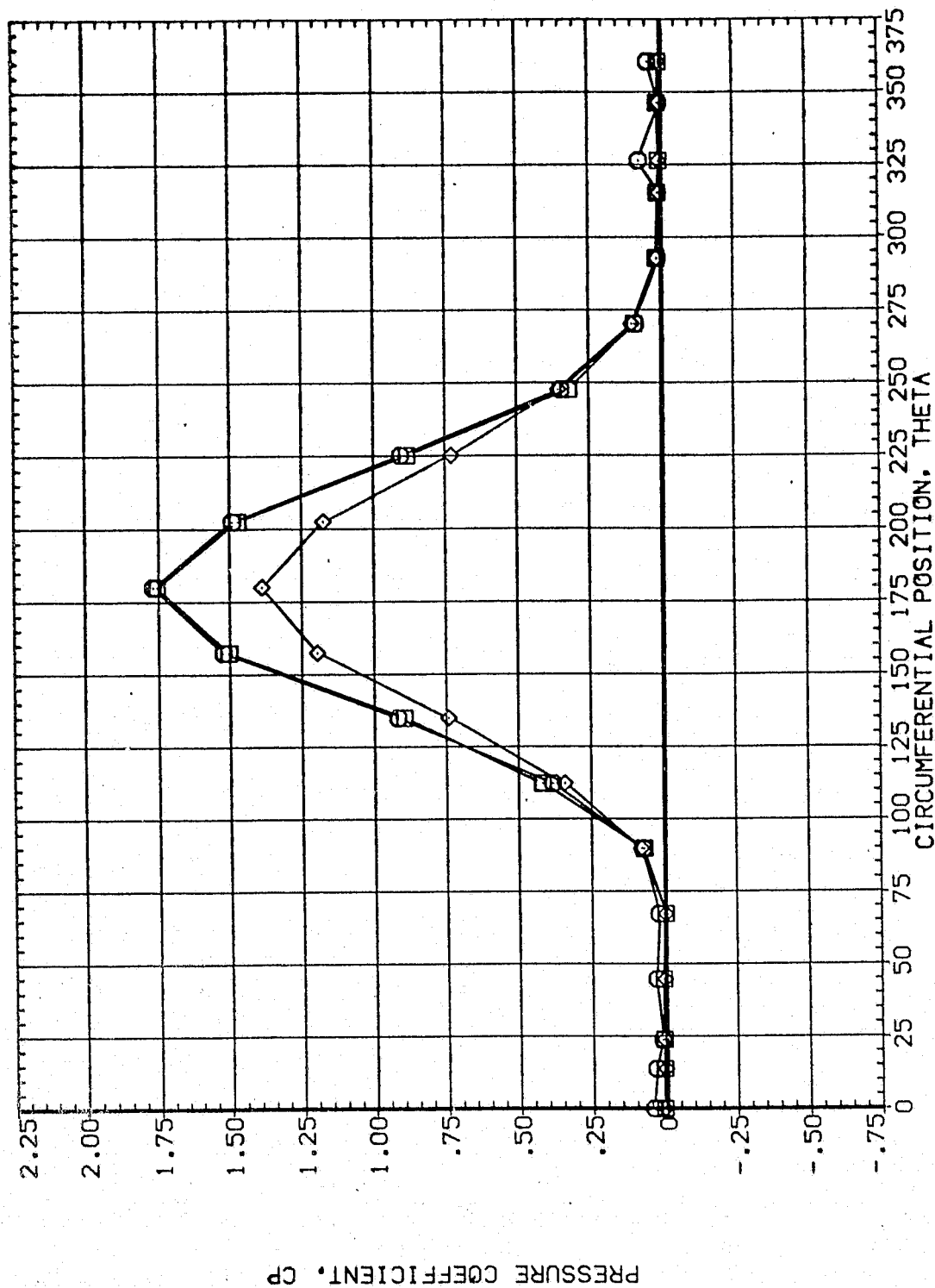


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES
○	.055	97.830	4.960	BETA .000
□	.108			OFFSET 2.000
◇	.162			PHI 90.000

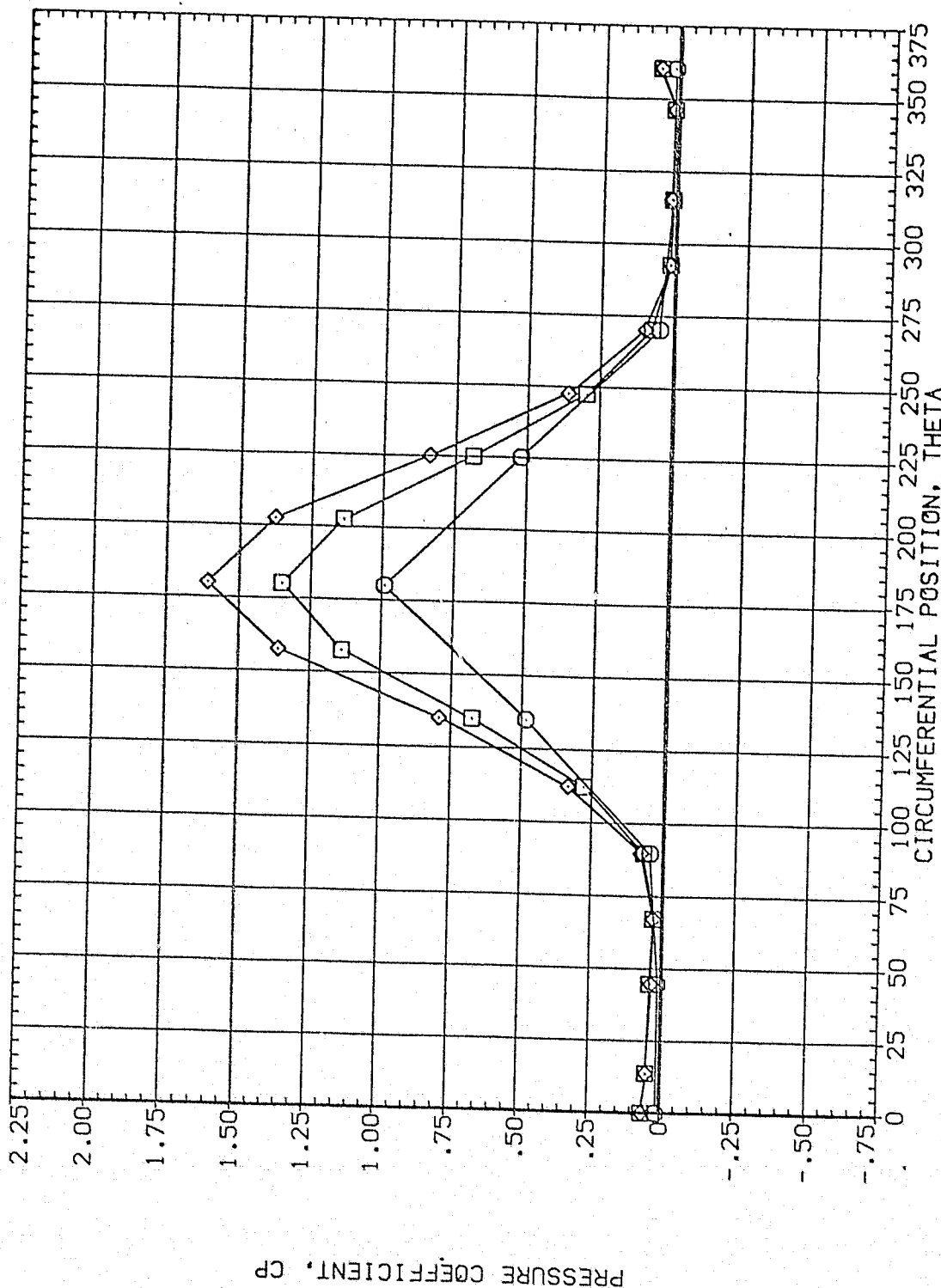


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

SYMBOL X/LB ALPHA HACH
 □ .216 97.830 4.960
 ◇ .322 .518

PARAMETRIC VALUES
 BETA .000 OFFSET 90.000
 MOUNT 2.000 PHI .000

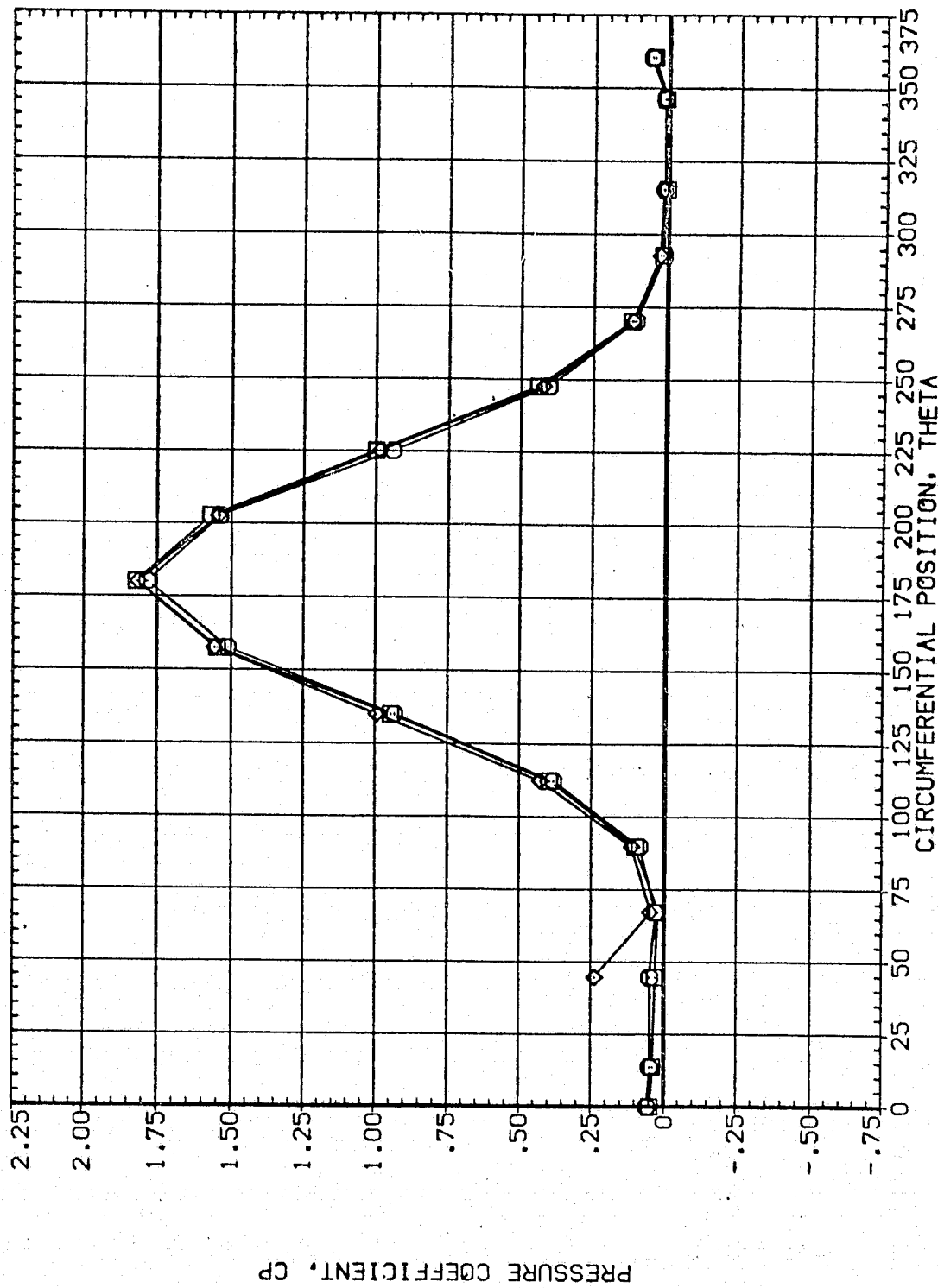


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A079)

SYMBOL	X/LB	ALPHA	MACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
□	.610	97.830	4.960	HQUNT	.000	.000
◇	.735				2.000	
◇	.860					50.000

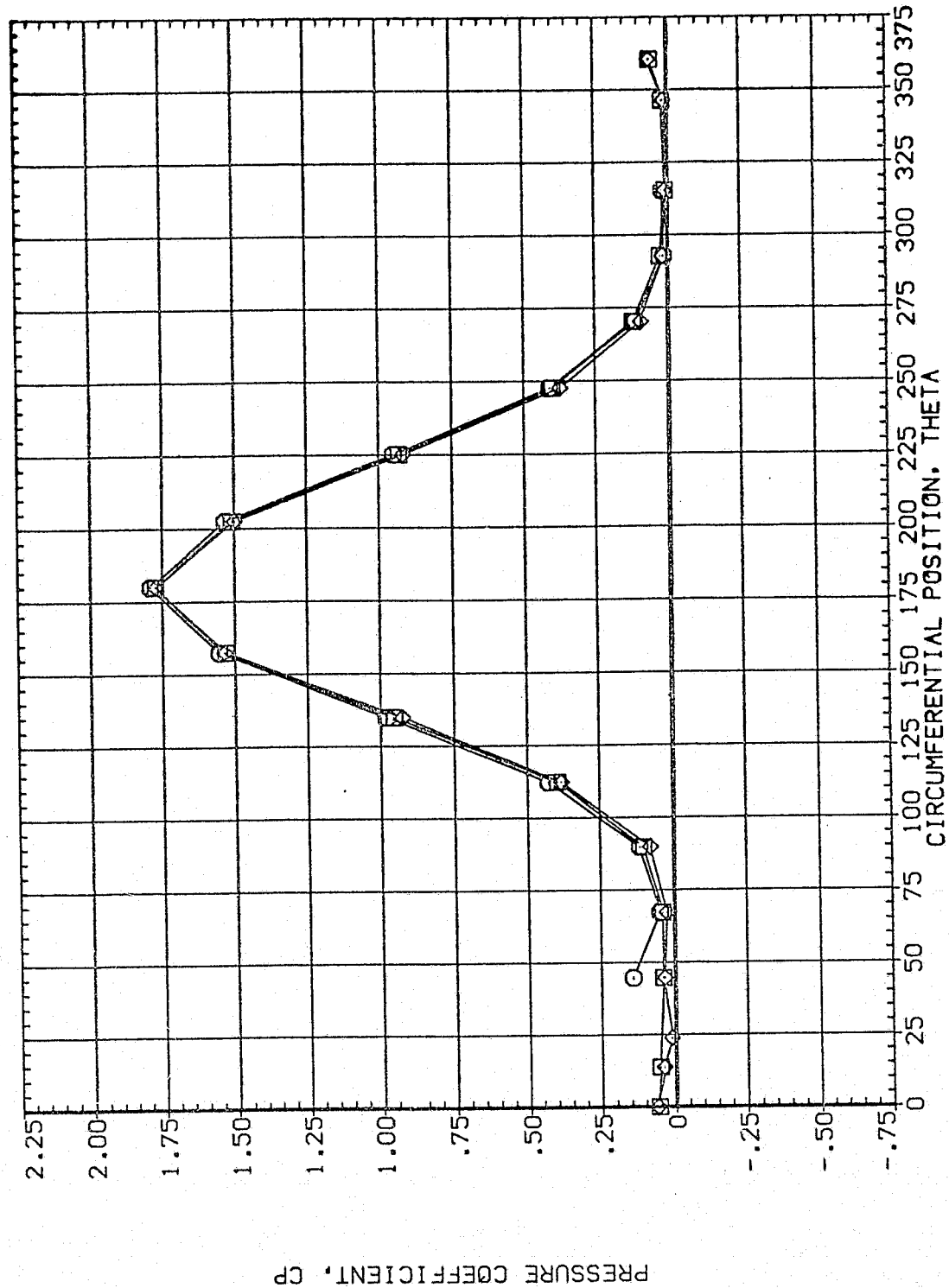


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
□	.892	97.830	4.960	MOUNT	.000 OFFSET
◇	.923				2.000 PHI
	.954				90.000

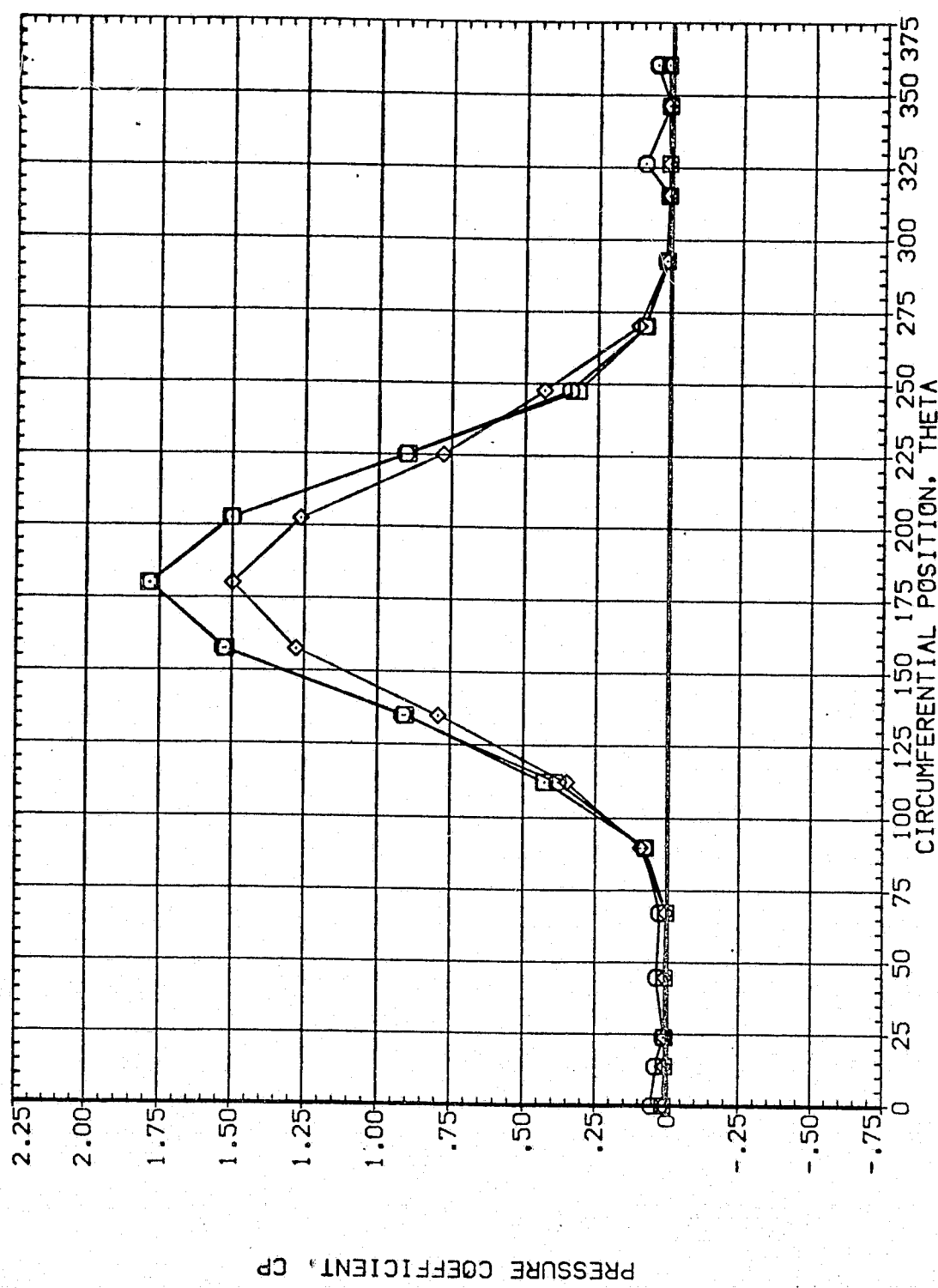


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES
PAGE 2676

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

SYMBOL	X/LB	ALPHA	HACH	PARAMETRIC VALUES		
				BETA	OFFSET	PHI
○	.055	99.750	4.960	2.000	.000	.000
□	.108					
◇	.162					

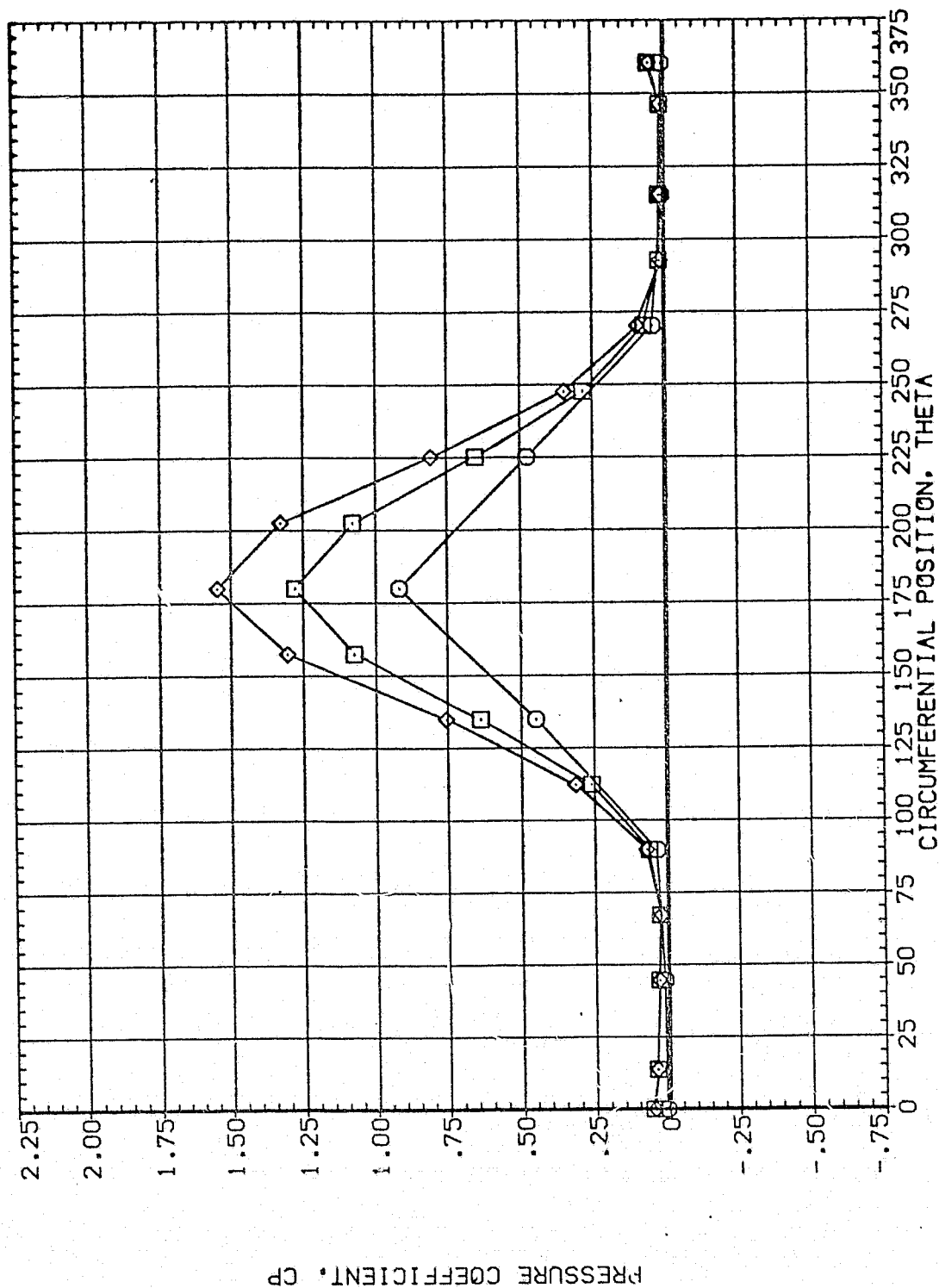


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

SYMBOL	X/LB	ALPHA	MACH	BETA	PARAMETRIC VALUES
○	.216	99.750	4.960	HOUNT	.000
□	.322			OFFSET	2.000
◇	.518			PHI	.000

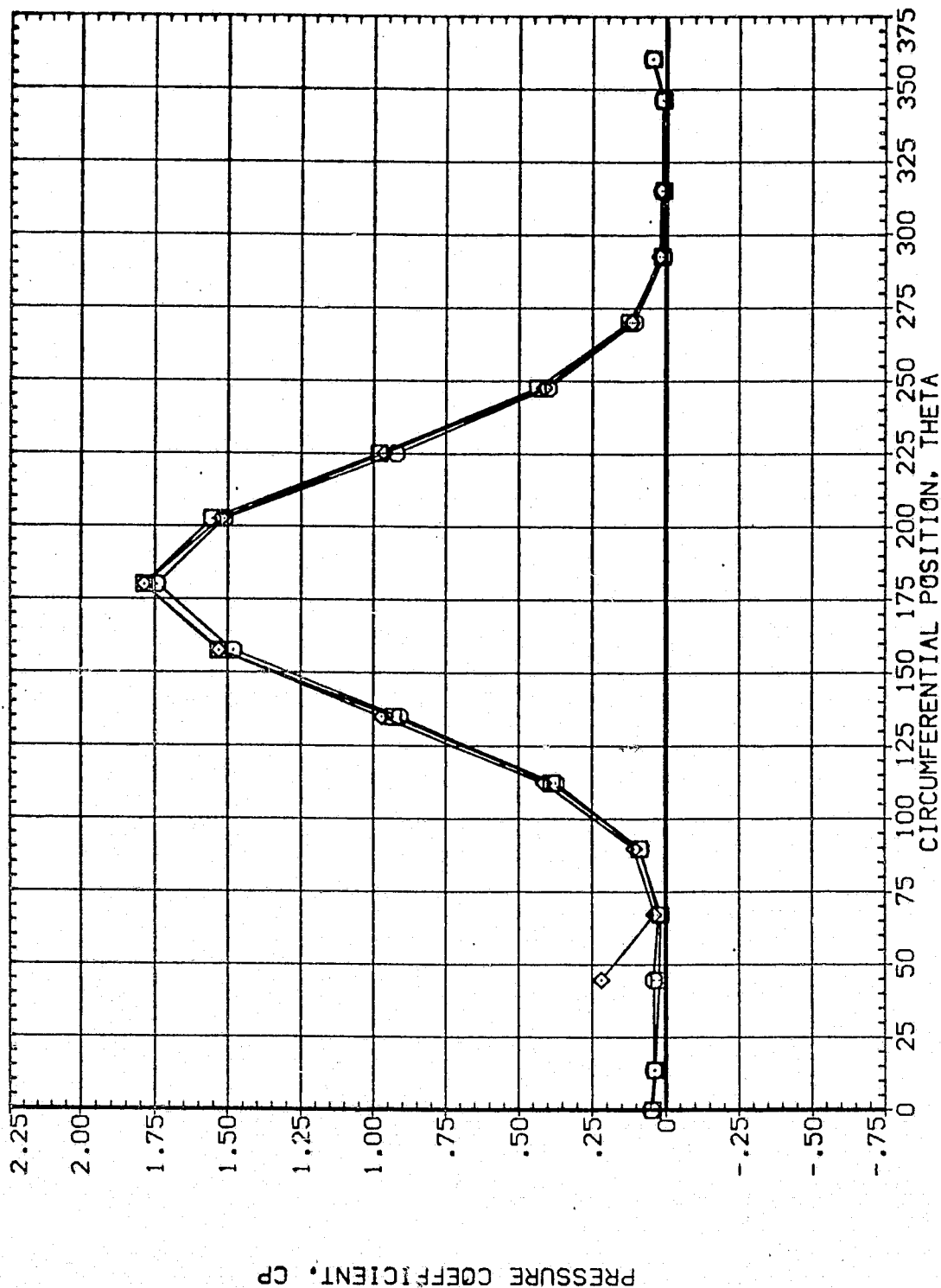


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (P1A080)

PARAMETRIC VALUES
BETA .000
HOUNT 2.000
PHI 90.000
OFFSET .000

SYMBOL X/LB ALPHA MACH
◇ .610 99.750 4.960
□ .735
◇ .860

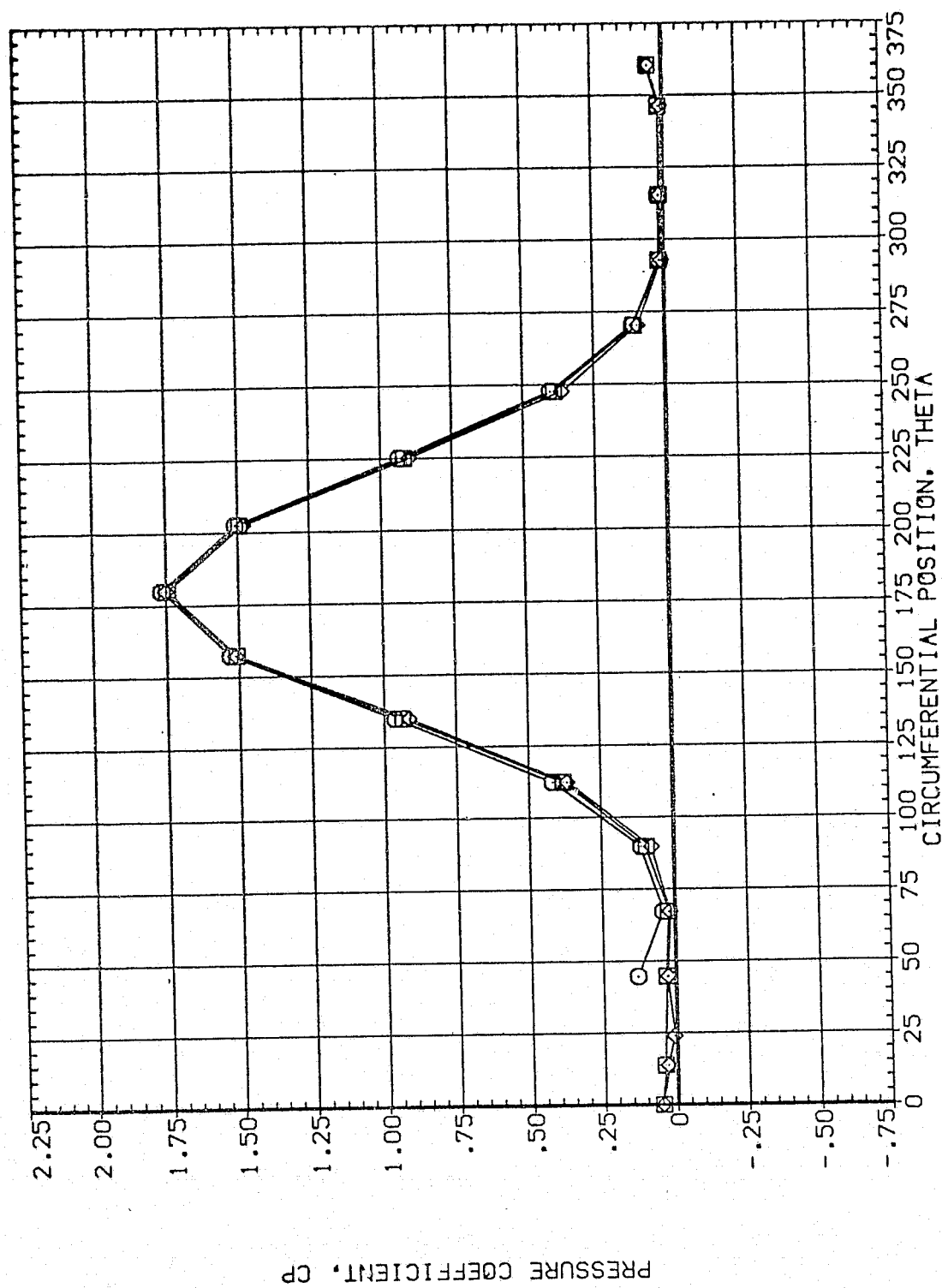


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

SYMBOL X/LB ALPHA MACH
 ○ .892 99.750 4.980
 □ .923
 ◇ .554

PARAMETRIC VALUES
 BETA .000
 HOUNT 2.000
 OFFSET PHI 90.000
 .000

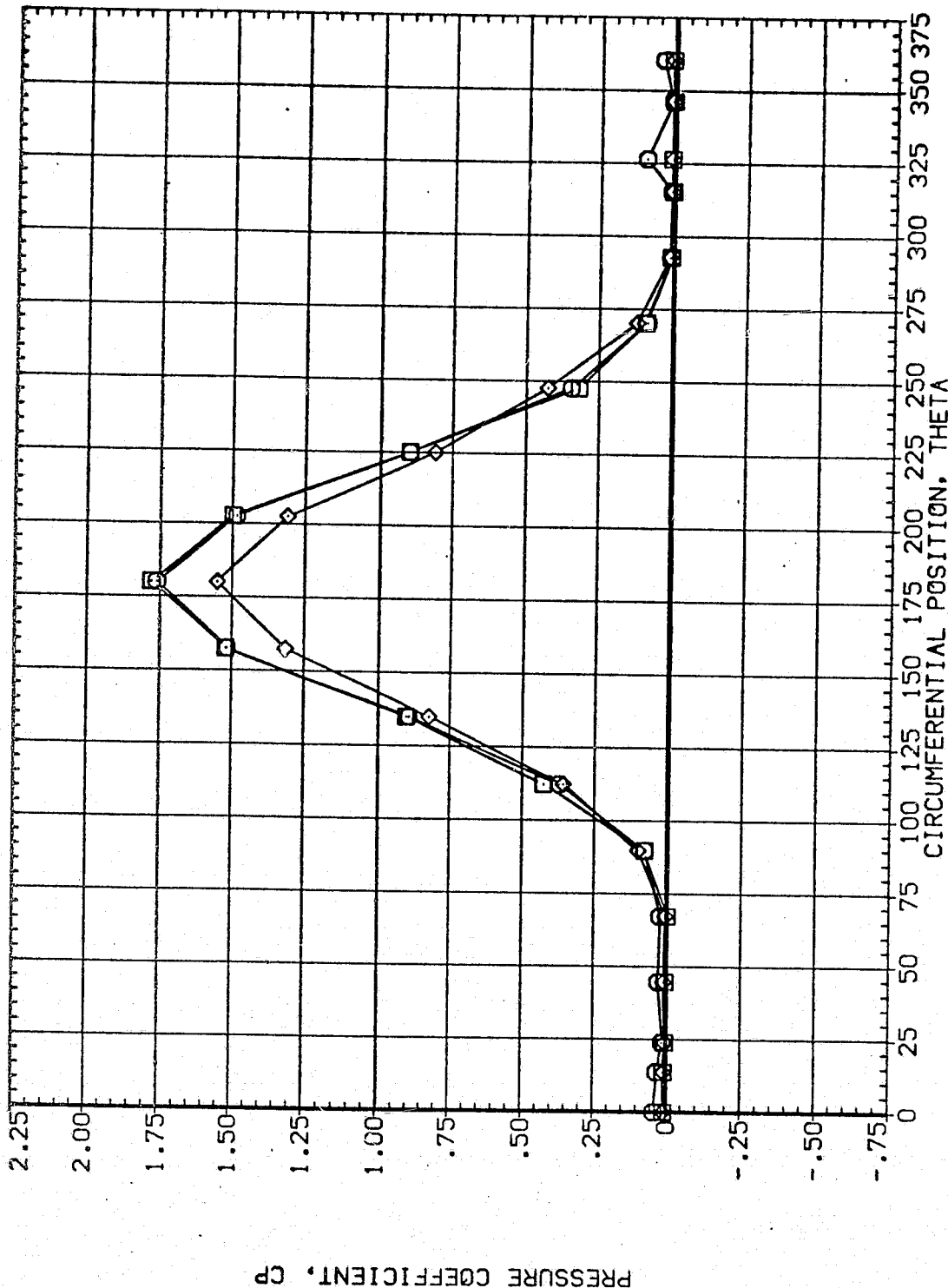


FIG. 9 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T2 WITHOUT PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (A1AX61)

SYMBOL

ALPHA
51.110
54.110
57.110
60.130
63.130

PARAMETRIC VALUES
BETA
PHI
-0.000
0.000
2.000

REFERENCE INFORMATION
SREF 572.5550
LREF 324.0000
BREF 324.0000
XMRP 1086.4000
YMRP 0.0000
ZMRP 400.0000
SCALE 0.0030

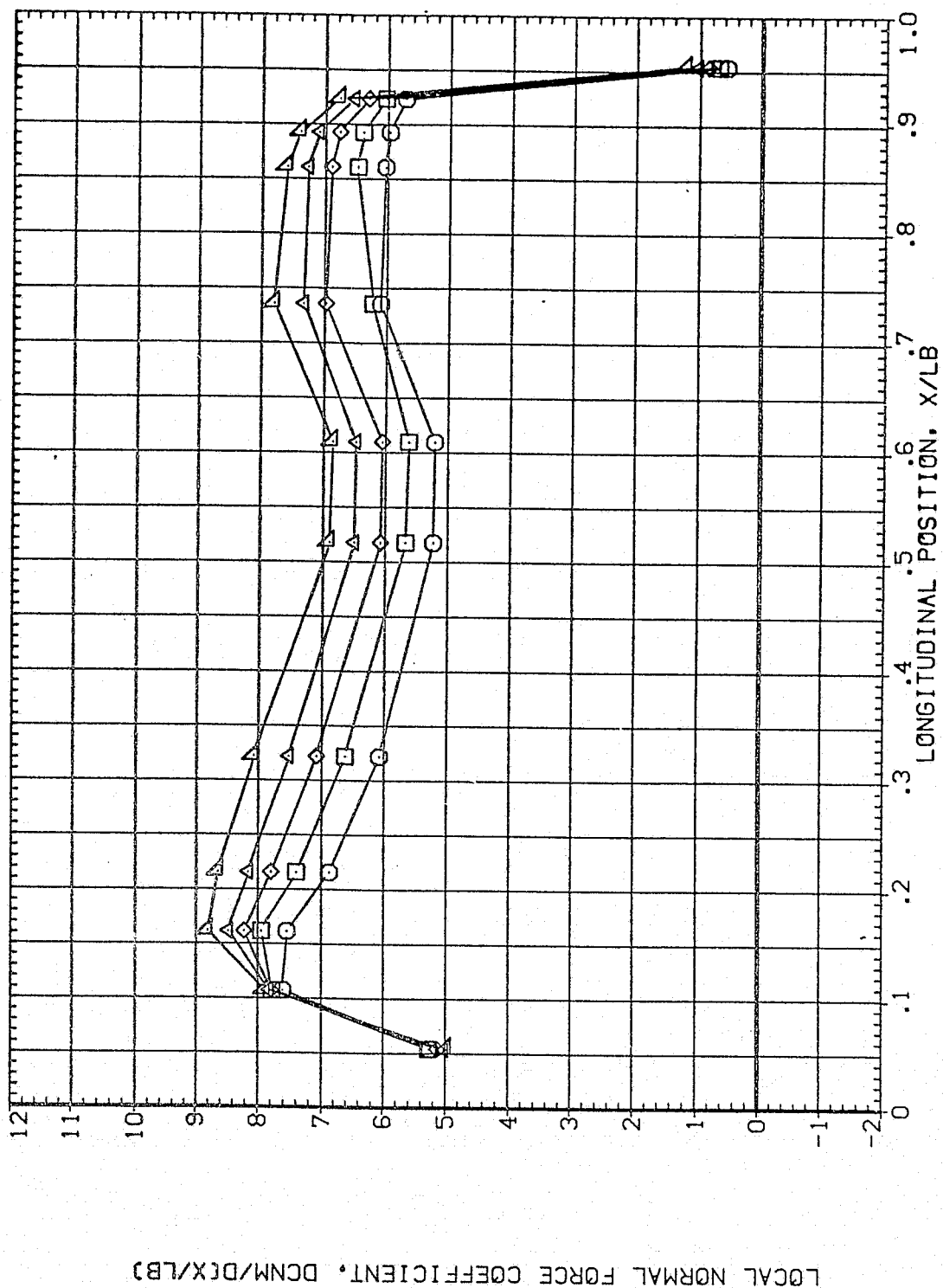


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 1.96

SYMBOL
 ○ □ ◇ △ ▽

ALPHA
 65.130
 69.130
 69.960
 71.980
 74.860

BETA
 PHI

PARAMETRIC VALUES
 .000 MOUNT 2.000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XMRP 1086.4000
 YMRP .0000
 ZMRP 400.0000
 SCALE .0030

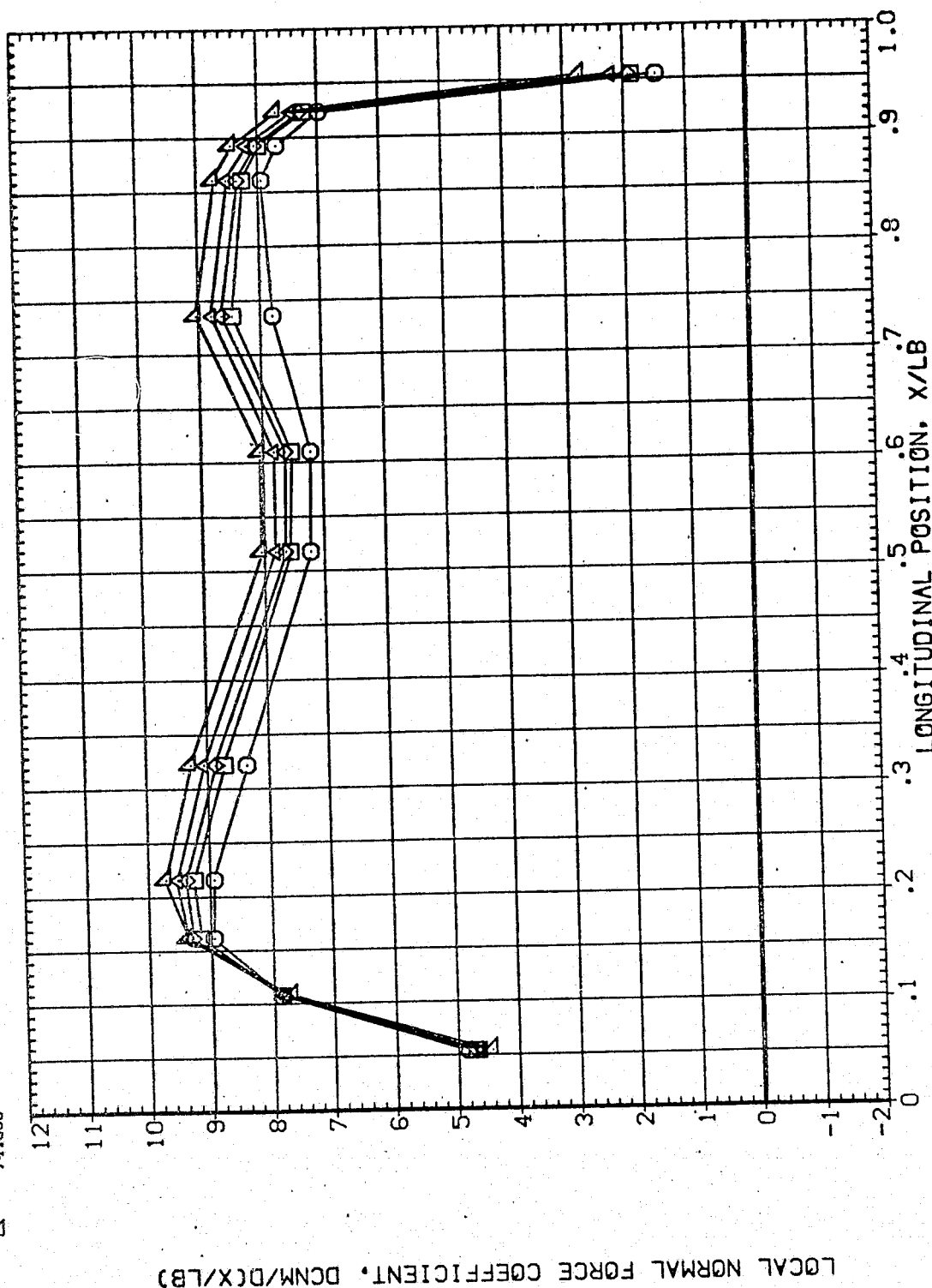


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 1.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (A1AX61)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	77.860	PHI	.000	572.5530
□	79.930	PHI	.000	324.0000
◇	81.830			324.0000
△	84.830			1086.4000
▽	87.830			400.0000
				400.0000
				SCALE .0030

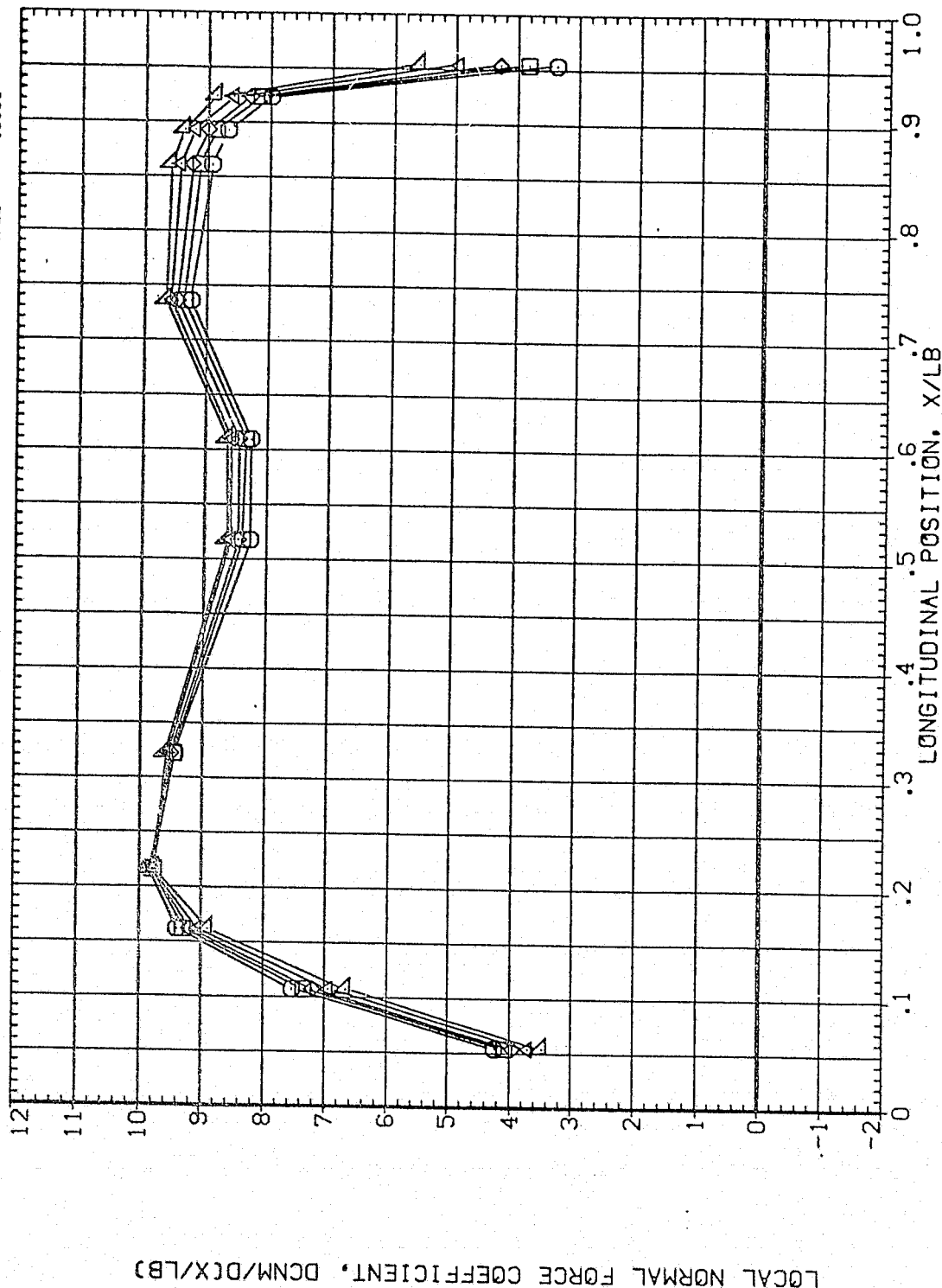


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTRUDANCES

(A)MACH = 1.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (A1AX61)

SYMBOL		PARAMETRIC VALUES		REFERENCE INFORMATION	
□	ALPHA	BETA	MOUNT	SREF	SQ. FT
◇	91.830	PHI	.000	LREF	324.0000
△	94.850		.000	BREF	324.0000
▽	97.850			XHRP	1086.4000
△	99.730			YHRP	400.0000
				ZHRP	400.0000
				SCALE	.0030

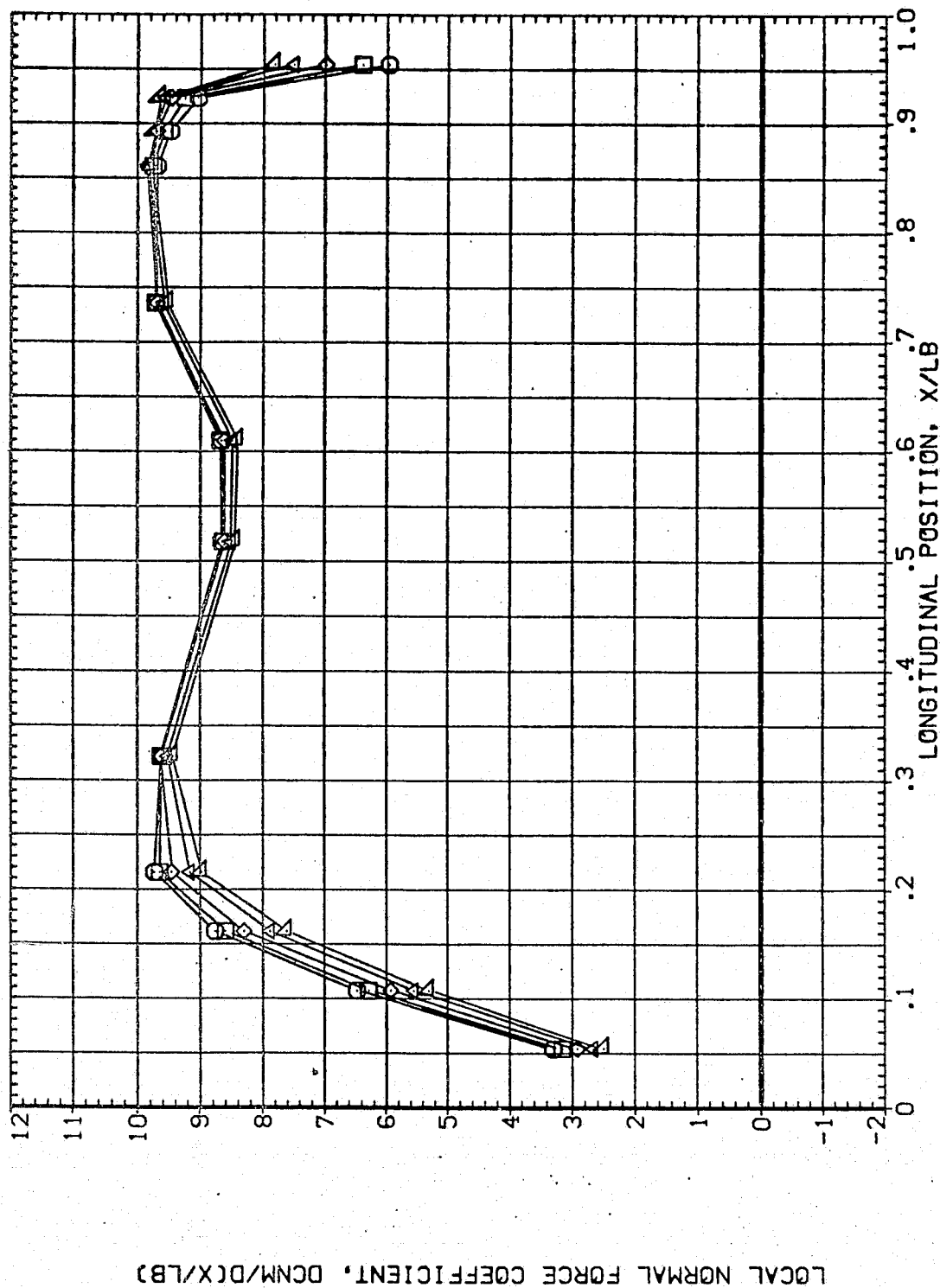


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 1.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (N1A061)

SYMBOL	ALPHA	BETA	PHI	PARAMETRIC VALUES	REFERENCE INFORMATION
○	51.000	.000	.000	2.000	SREF 572.5550
□	54.130	.000	.000		LREF 324.0000
◇	57.130				BREF 324.0000
△	60.130				XMRP 1086.4000
▽	63.130				YMRP .0000
					ZMRP 400.0000
					SCALE .0030

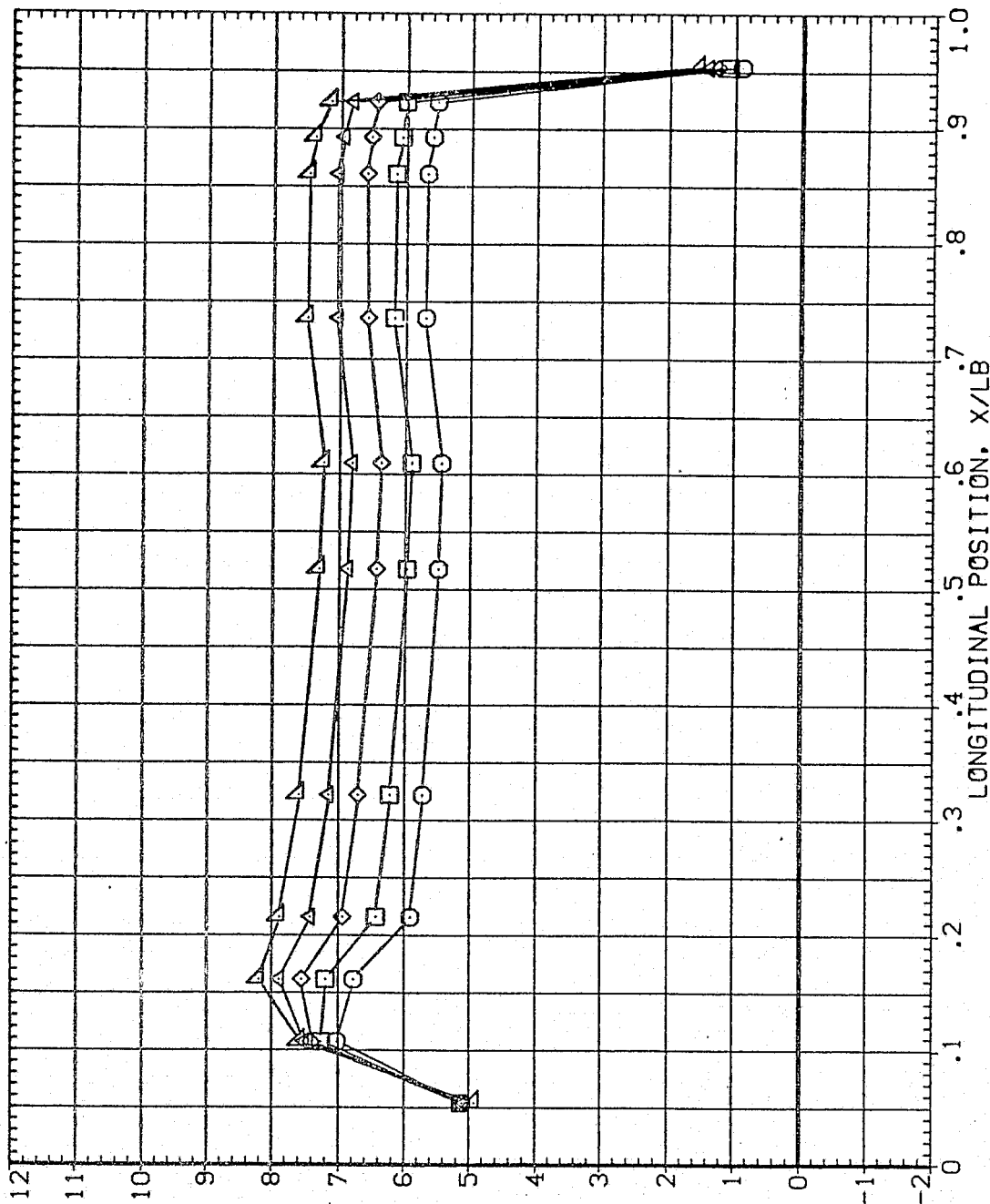


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 3.48

SYMBOL
 ○ □ ◇ △

ALPHA
 66.130
 69.130
 69.980
 71.880
 74.860

PARAMETRIC VALUES
 BETA
 .000
 .000
 .000

PHI
 2.000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

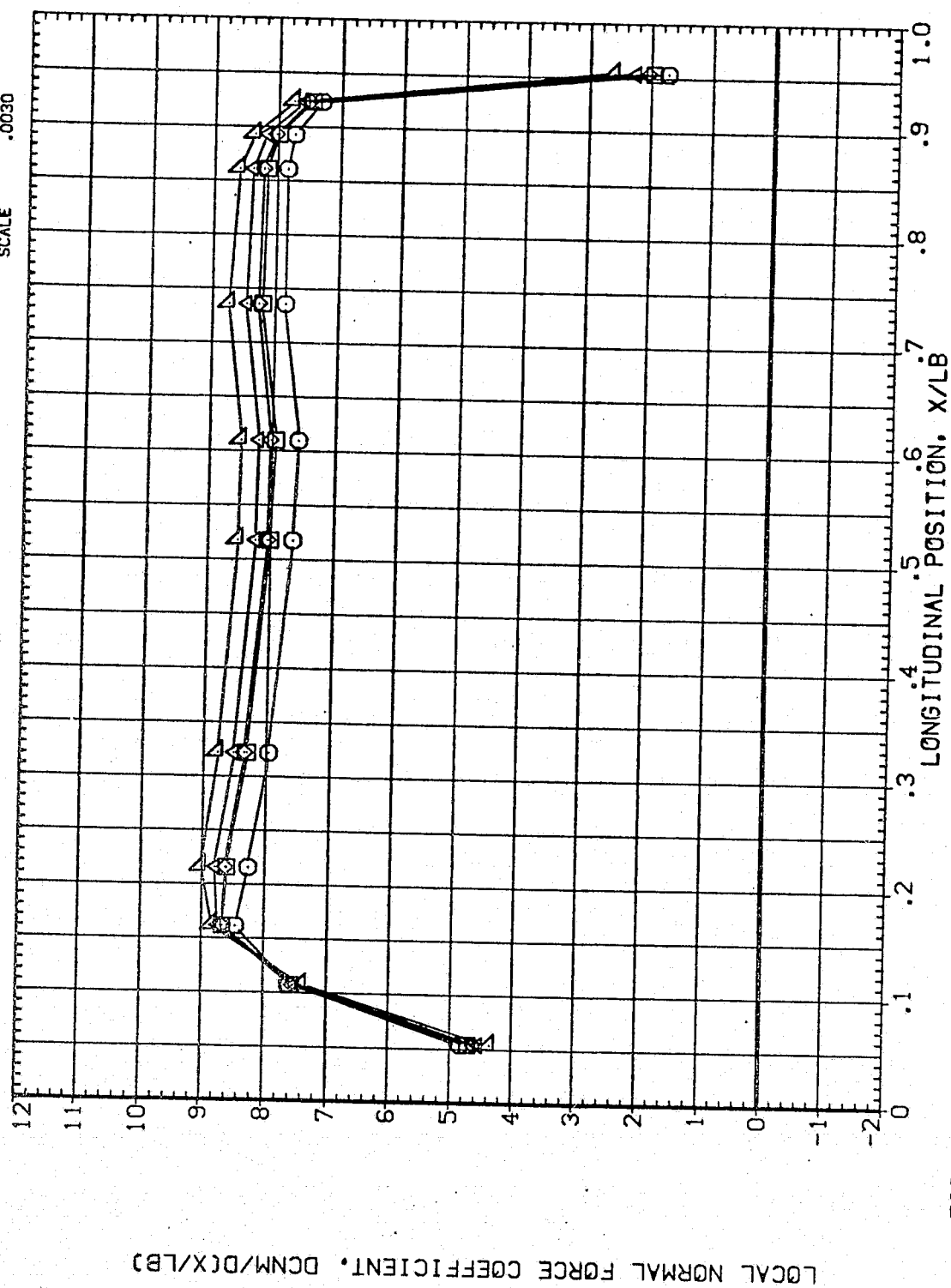


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

CA/MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (N1A061)

SYMBOL	ALPHA	BETA	PHI	PARAMETRIC VALUES	REFERENCE INFORMATION
□	77.880	.000	.000	2.000	SREF 572.5550
◇	79.930	.000	.000		LREF 324.0000
△	81.830				BREF 324.0000
▽	84.830				XHRP 1086.4000
	87.830				YHRP 400.0000
					ZHRP 400.0000
					SCALE .0030
					IN. FT
					INCHES
					IN. XT
					IN. YT
					IN. ZT

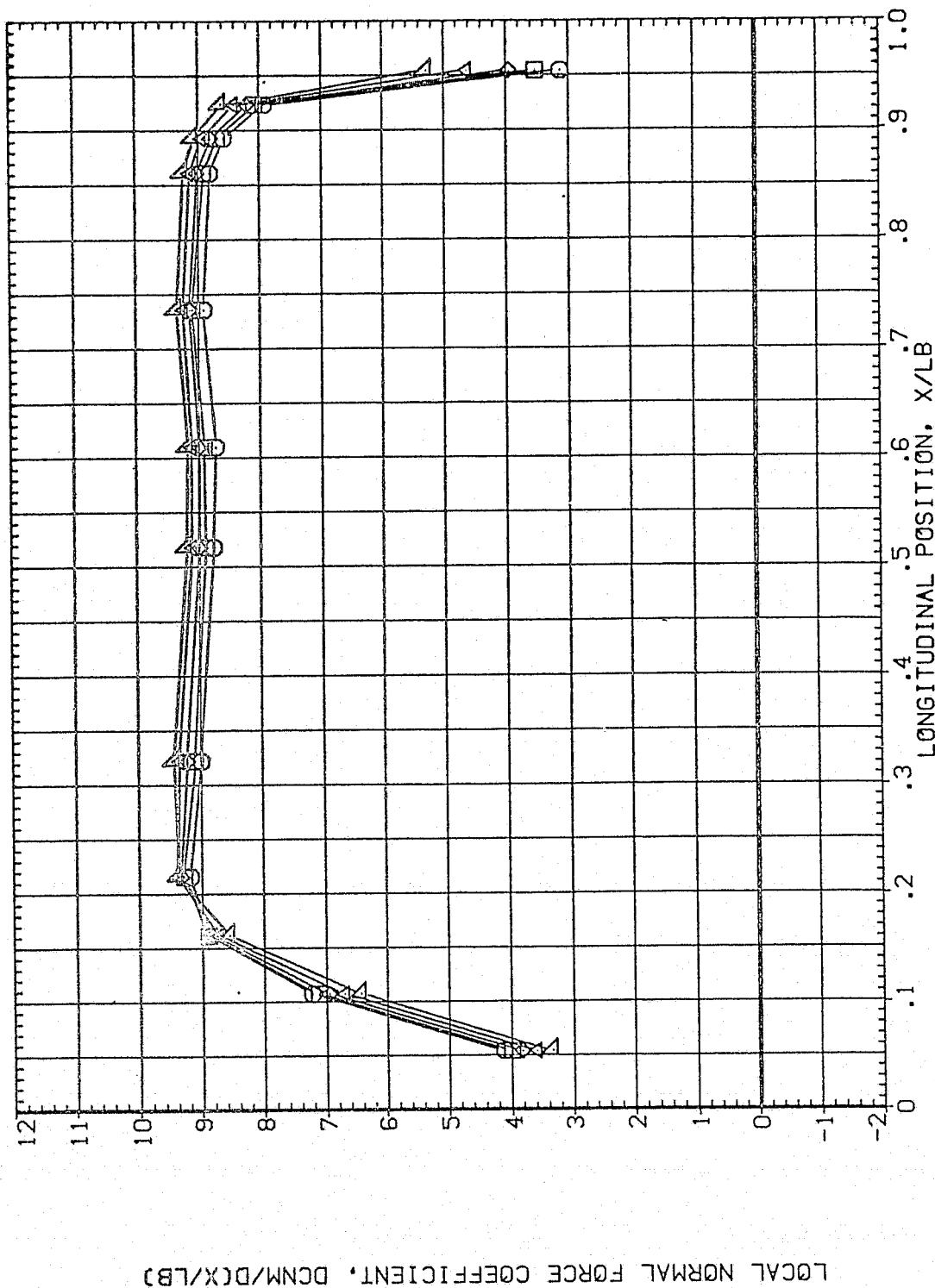


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 3.48

SYMBOL
 ○
 □
 ◇
 △
 ▽

ALPHA
 89.830
 91.850
 94.850
 97.830
 99.750

BETA
 PHI
 .000
 .000

PARAMETRIC VALUES
 MOUNT 2.000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XMRP 1086.4000
 YMRP .0000
 ZMRP 400.0000
 SCALE .0030
 SQ. FT
 INCHES
 INCHES
 IN. XT
 IN. YT
 IN. ZT

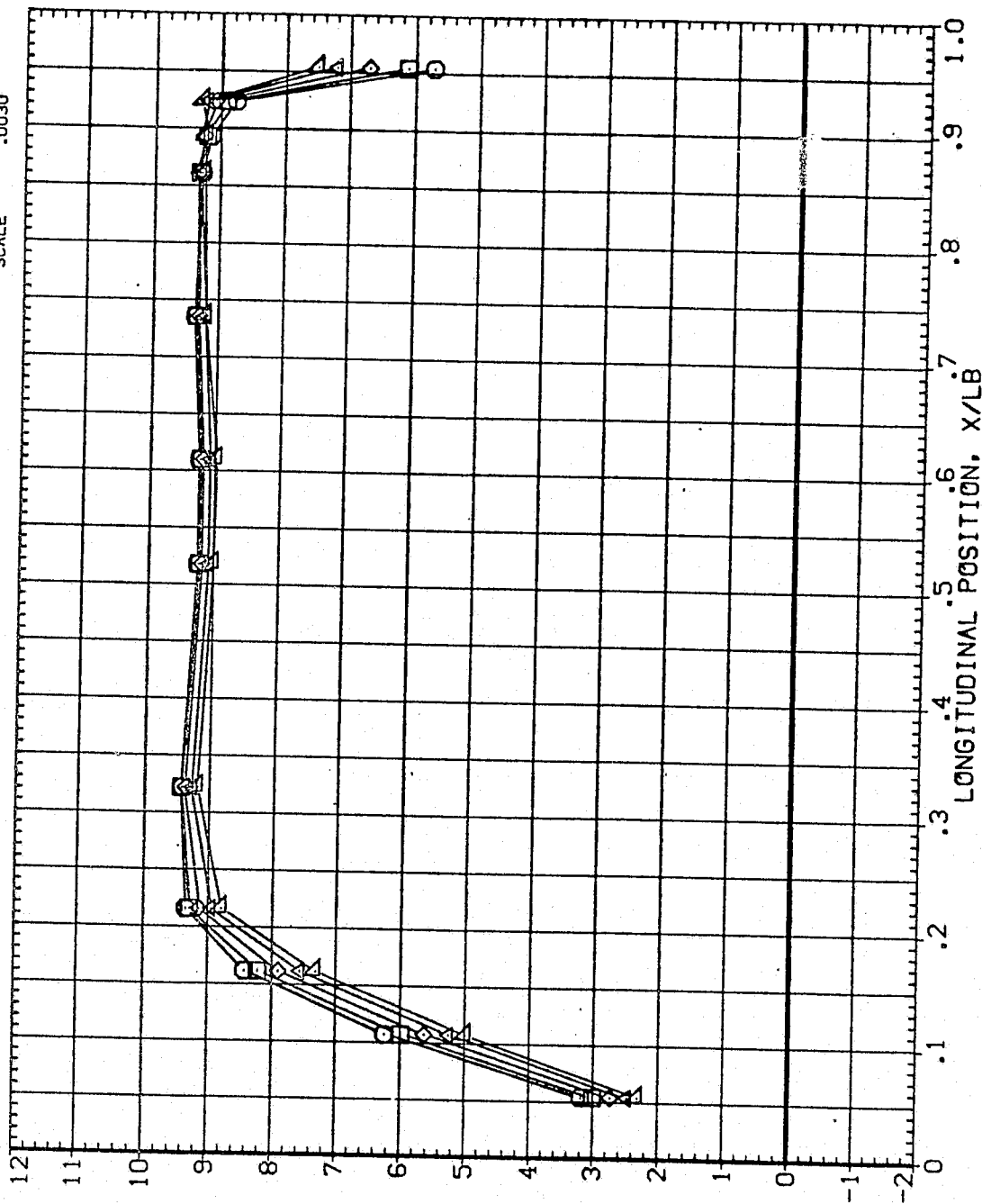


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(α)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (M1AX61)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	51.000	PHI	.000	SREF 572.5550
□	54.130		.000	LREF 324.0000
◇	57.130			BREF 324.0000
△	60.130			XMRP 1086.4000
▽	63.130			YMRP .0000
				ZMRP 400.0000
				SCALE .0030

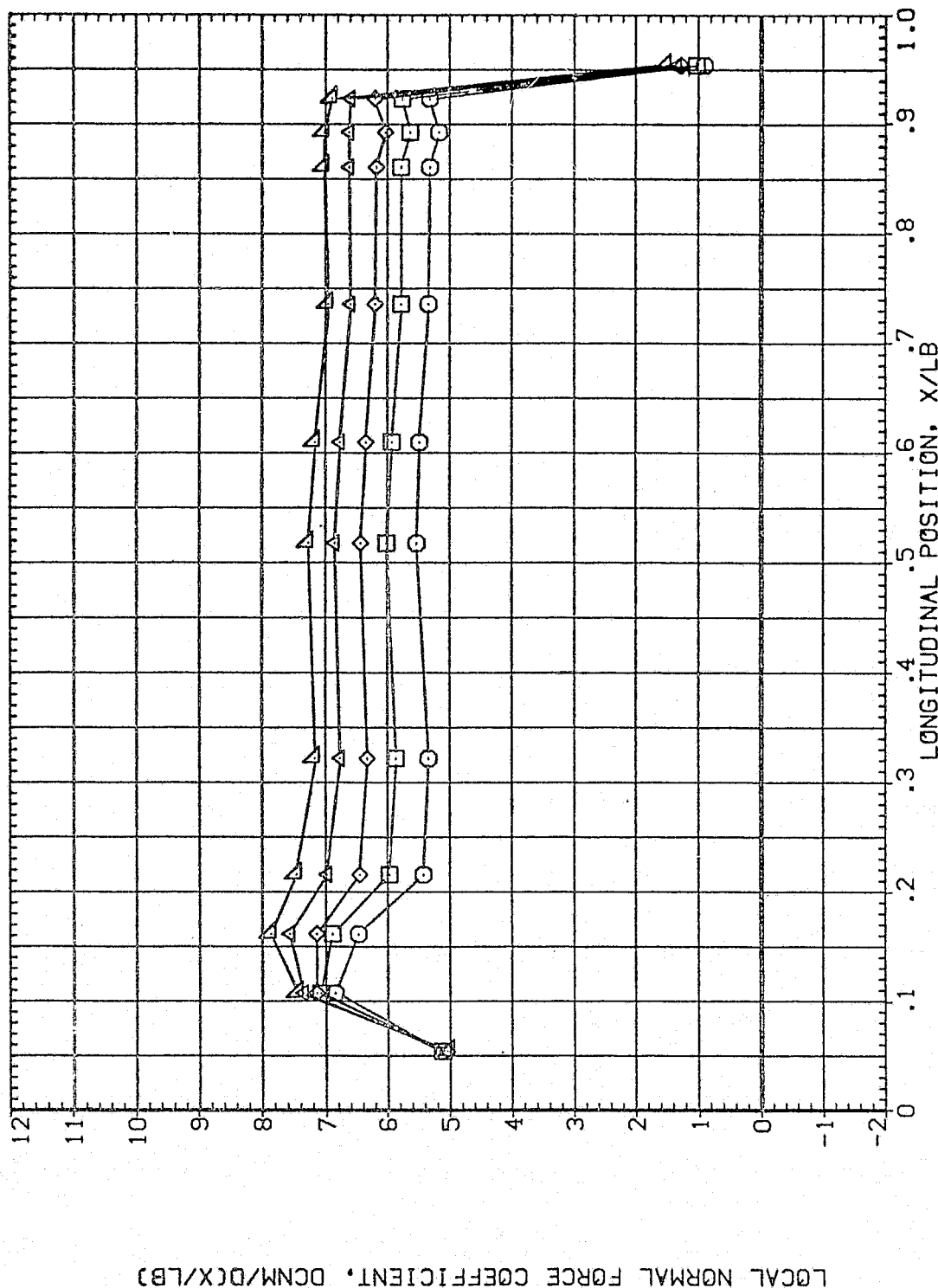


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(MACH = 4.96)

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

PARAMETRIC VALUES
 .000 HOUNT 2.000
 .000

BETA
 PHI

ALPHA
 66.130
 69.130
 69.980
 71.980
 74.860

SYMBOL
 ○
 □
 ◇
 △

LOCAL NORMAL FORCE COEFFICIENT, $C_{DN}/D(X/LB)$

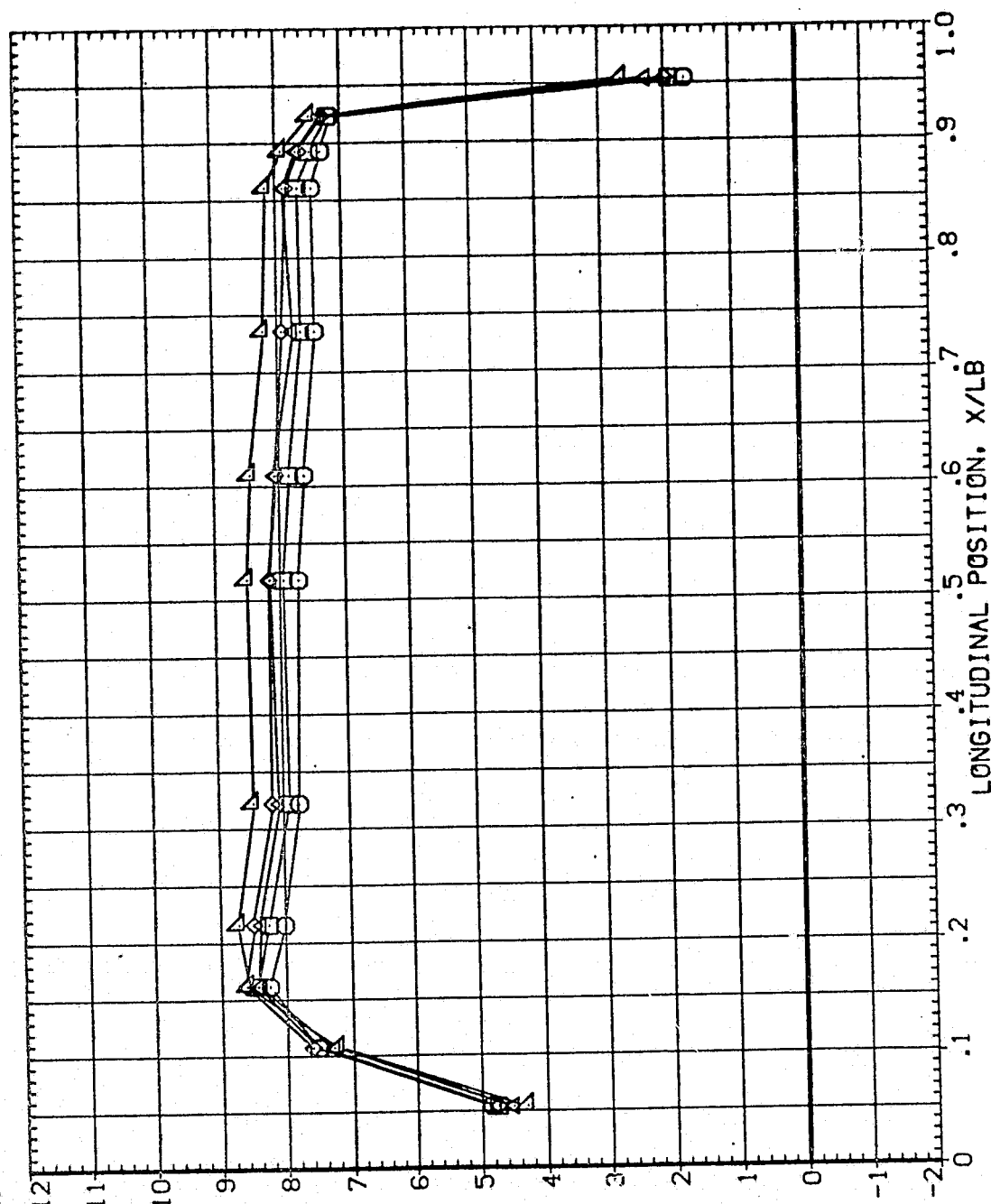


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (M1AX61)

SYMBOL	ALPHA	BETA	PHI	PARAMETRIC VALUES	REFERENCE INFORMATION
○	77.880	.000	.000	MOUNT	572.5550
◇	79.930	.000	.000		324.0000
□	81.830				324.0000
△	84.830				1086.4000
▽	87.830				400.0000
					SCALE .0030

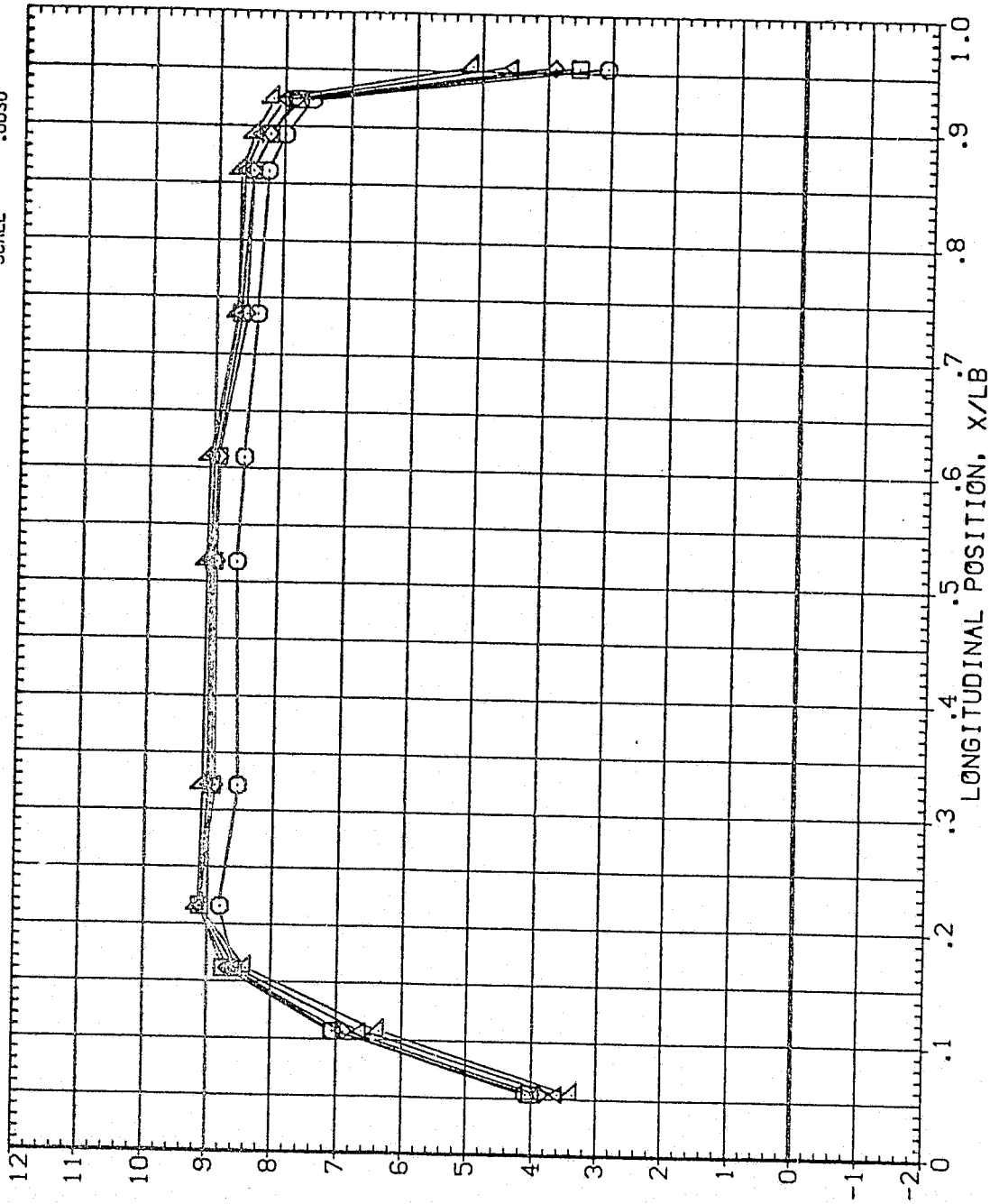


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

CA/MACH = 4.96

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

SYMBOL	PARAMETRIC VALUES		REFERENCE INFORMATION	
	ALPHA	BETA	SREF	SR, FT
□	89.830	PHI	LREF	INCHES
◇	91.850		BREF	INCHES
△	94.850		XMRP	IN. XT
△	97.830		YMRP	IN. YT
△	99.750		ZMRP	IN. ZT
			SCALE	

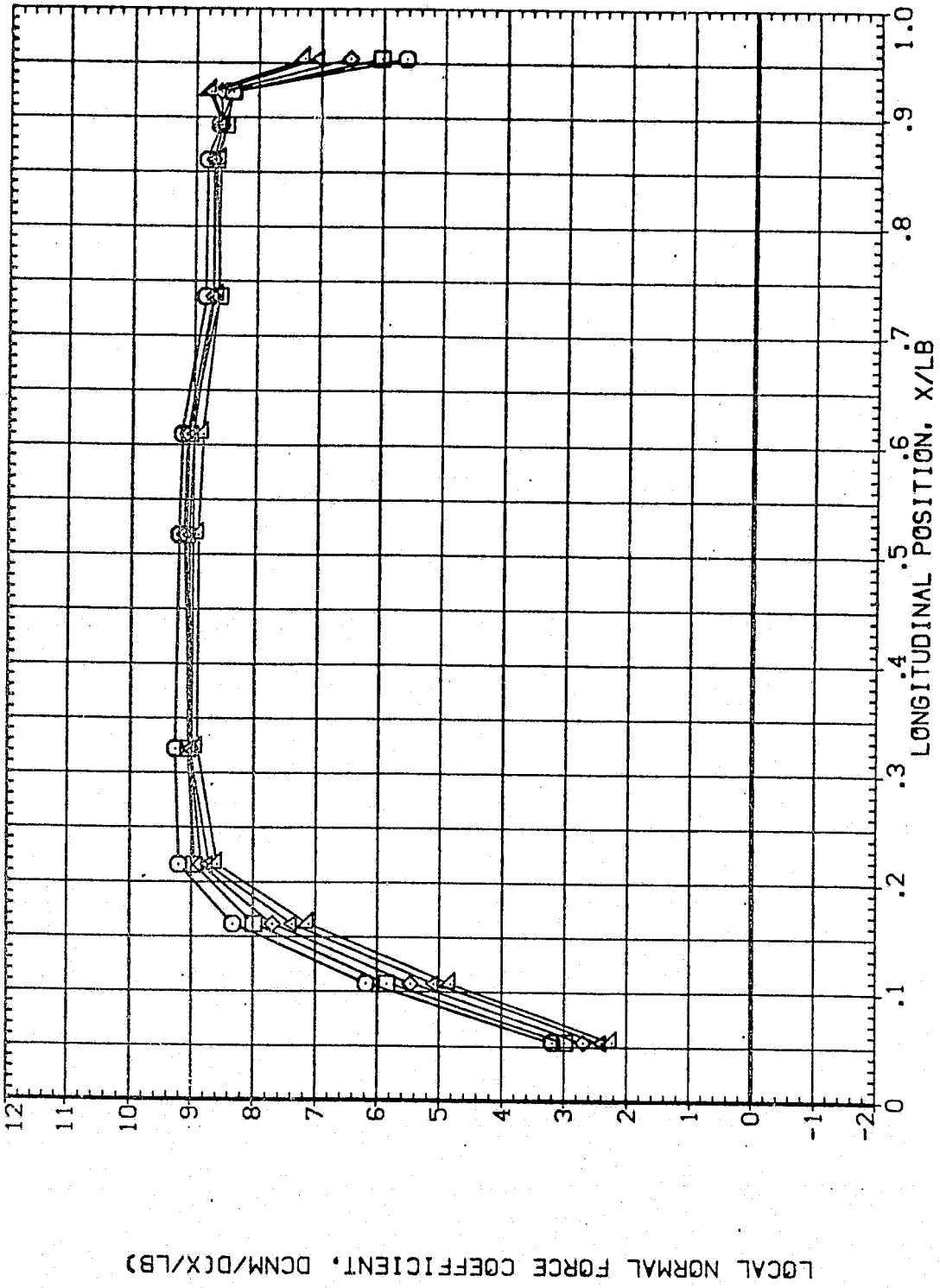


FIG. 10 LOCAL NORMAL FORCE DISTRIBUTION - T2 WITHOUT PROTRUDANCES

(A)MACH = 4.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (B1AX61)

REFERENCE INFORMATION

	INCHES	IN.	FT
SREF	572.5350		
LREF	324.0000		
BREF	324.0000		
YMRP	1086.4000		
ZMRP	400.0000		
SCALE			.0030

PARAMETRIC VALUES

	VALUE
ALPHA	51.110
BETA	54.110
PHI	57.110
	60.130
	63.130

SYMBOL

SYMBOL	VALUE
○	.000
□	.000
◇	.000
△	.000

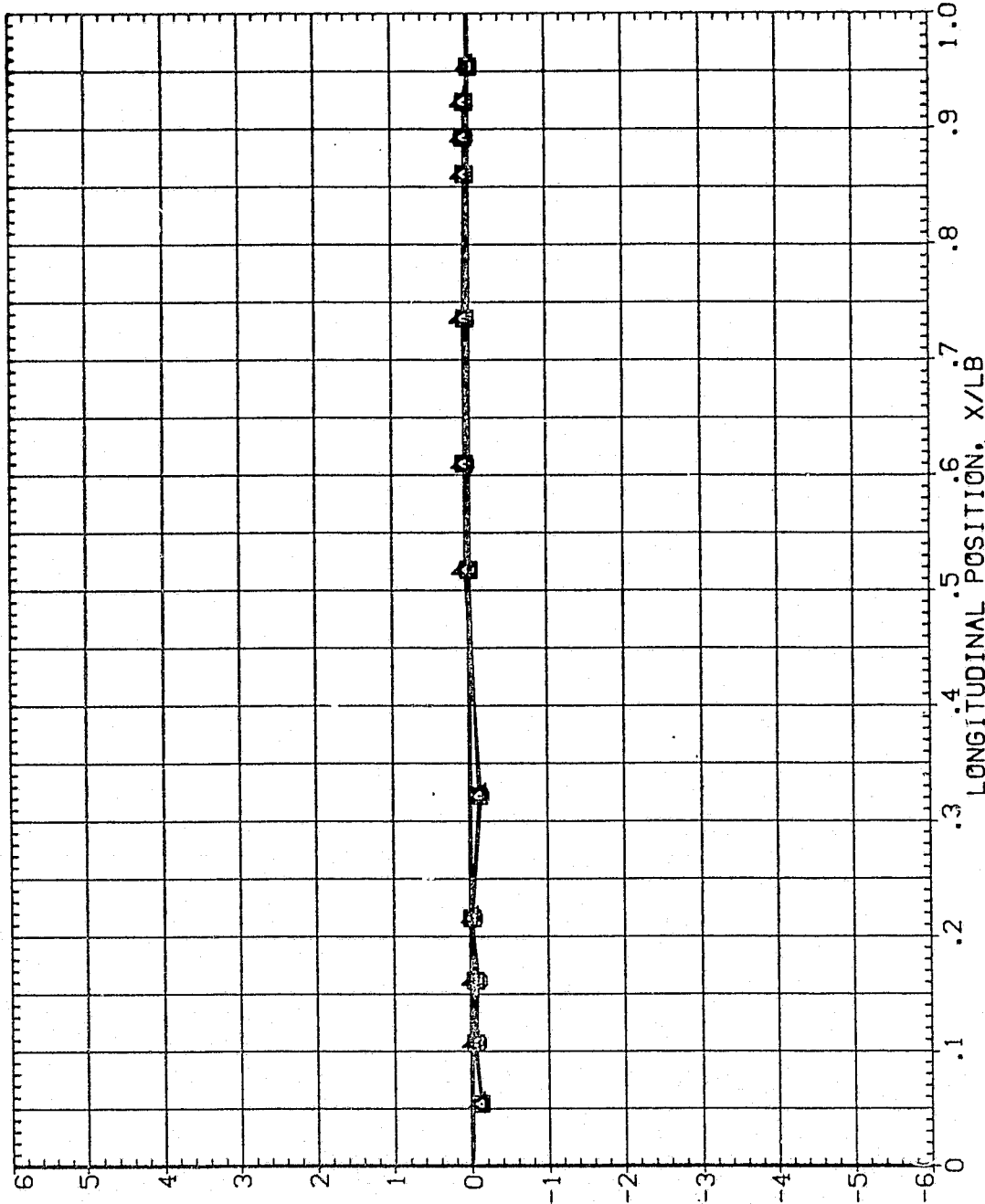


FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 1.96

SYMBOL
○
□
◇
△
▽

ALPHA
68.130
69.130
69.960
71.880
74.860

BETA
PHI
PARAMETRIC VALUES
.000
MOUNT
2.000

REFERENCE INFORMATION
SREF 572.5550
LREF 324.0000
BREF 324.0000
XMRP 1086.4000
YMRP .0000
ZMRP 400.0000
SCALE .0030
S0. FT
INCHES
IN. XT
IN. YT
IN. ZT

LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB

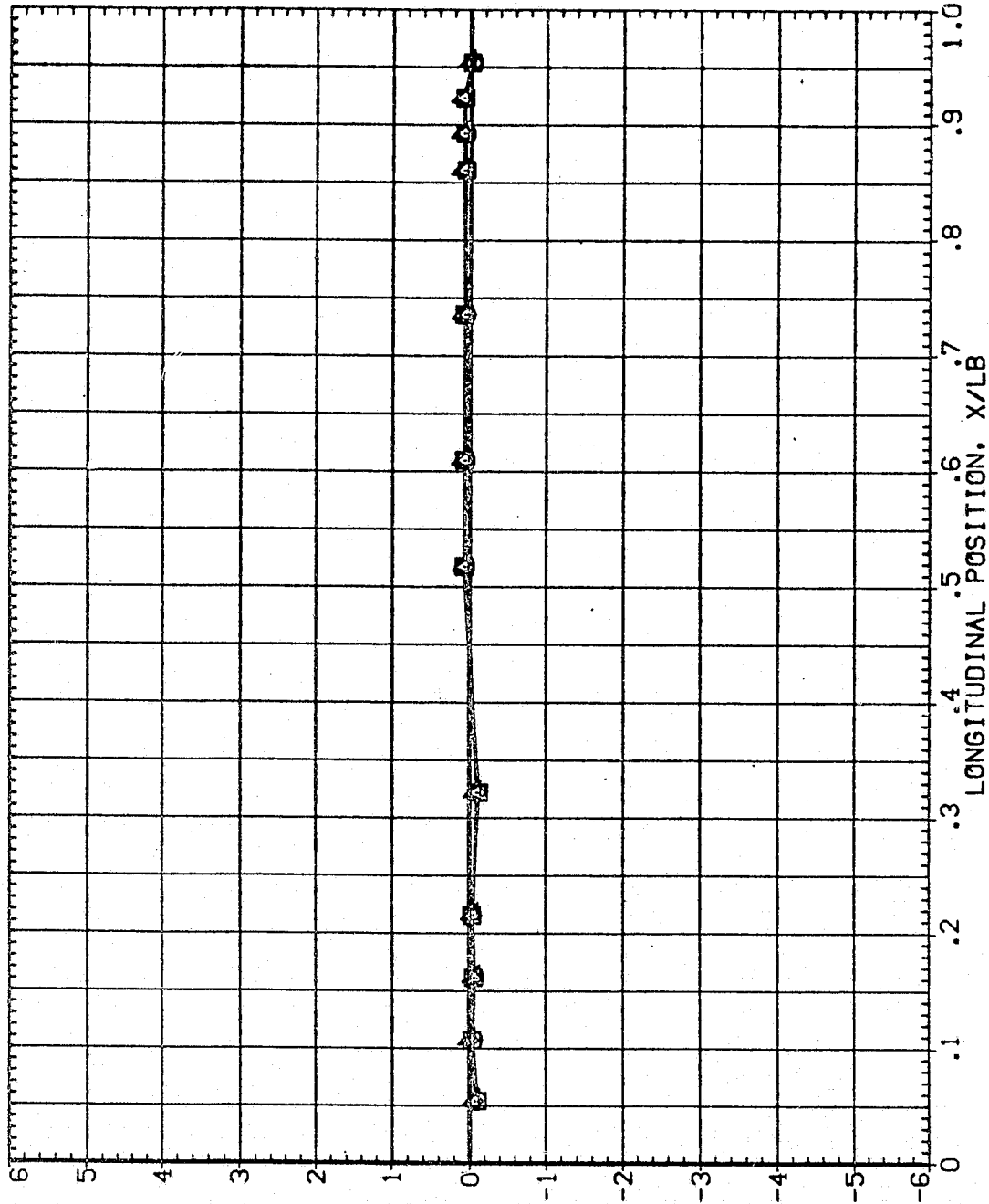


FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

CAJ MACH = 1.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (BIA61)

SYMBOL ALPHA BETA PHI
 77.860
 79.930
 81.830
 84.830
 87.830

PARAMETRIC VALUES
 .000 .000
 .000 .000

2.000

REFERENCE INFORMATION
 SREF 572.5530
 LREF 324.0000
 BREF 324.0000
 XMRP 1086.4000
 YMRP .0000
 ZMRP 400.0000
 SCALE .0030

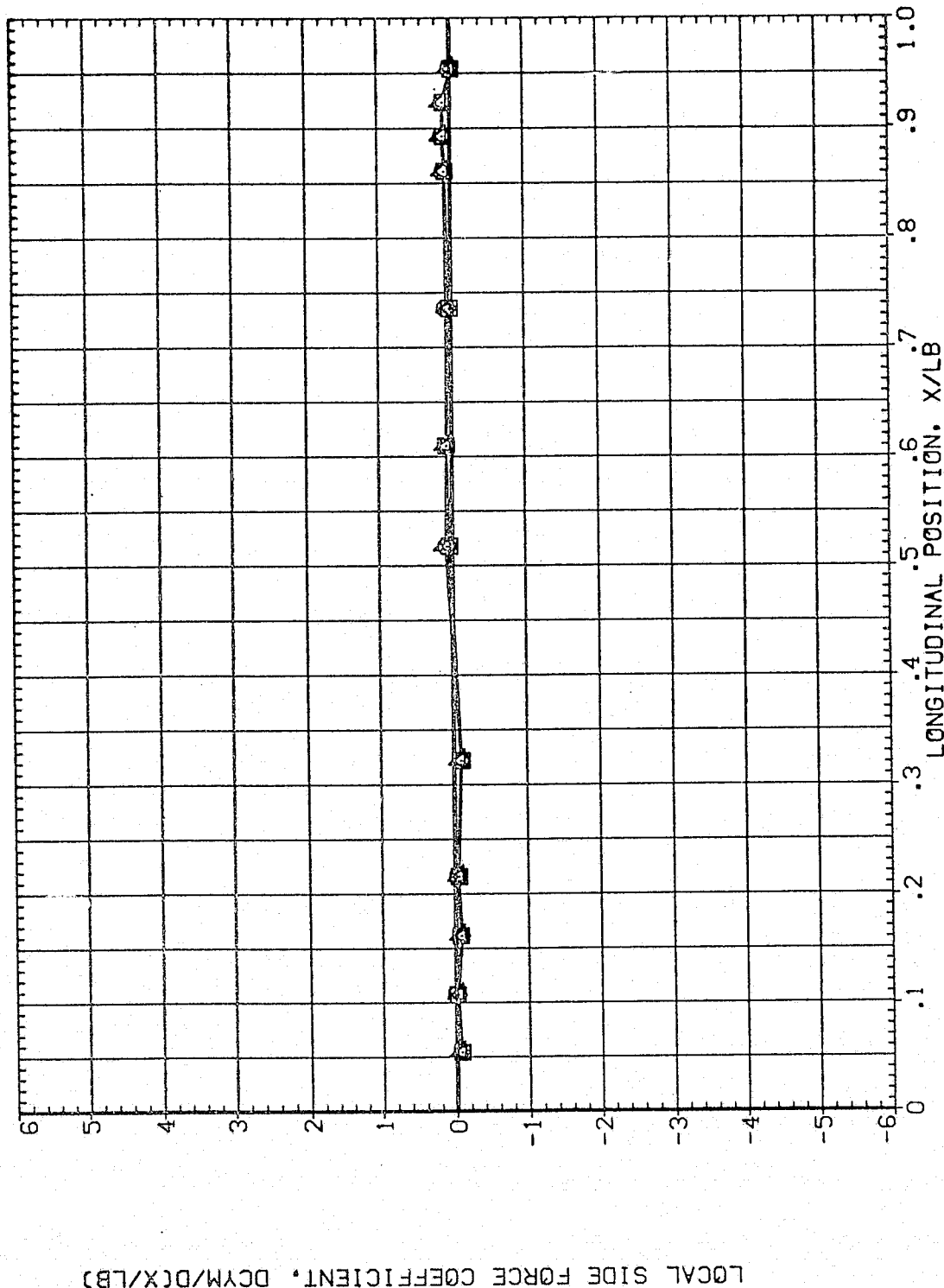


FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(M)MACH = 1.96

REPRODUCIBILITY OF THE
 ORIGINAL PAGE IS POOR

SYMBOL	ALPHA	BETA	PHI	PARAMETRIC VALUES	REFERENCE INFORMATION
□	89.830			.000	SREF 572.5550
◇	91.830			.000	LREF 324.0000
△	94.850				BREF 324.0000
▽	97.850				XMRP 1086.4000
	99.730				YMRP 400.0000
					ZMRP 400.0000
					SCALE .0030

LOCAL SIDE FORCE COEFFICIENT, $DCY/D(X/LB)$

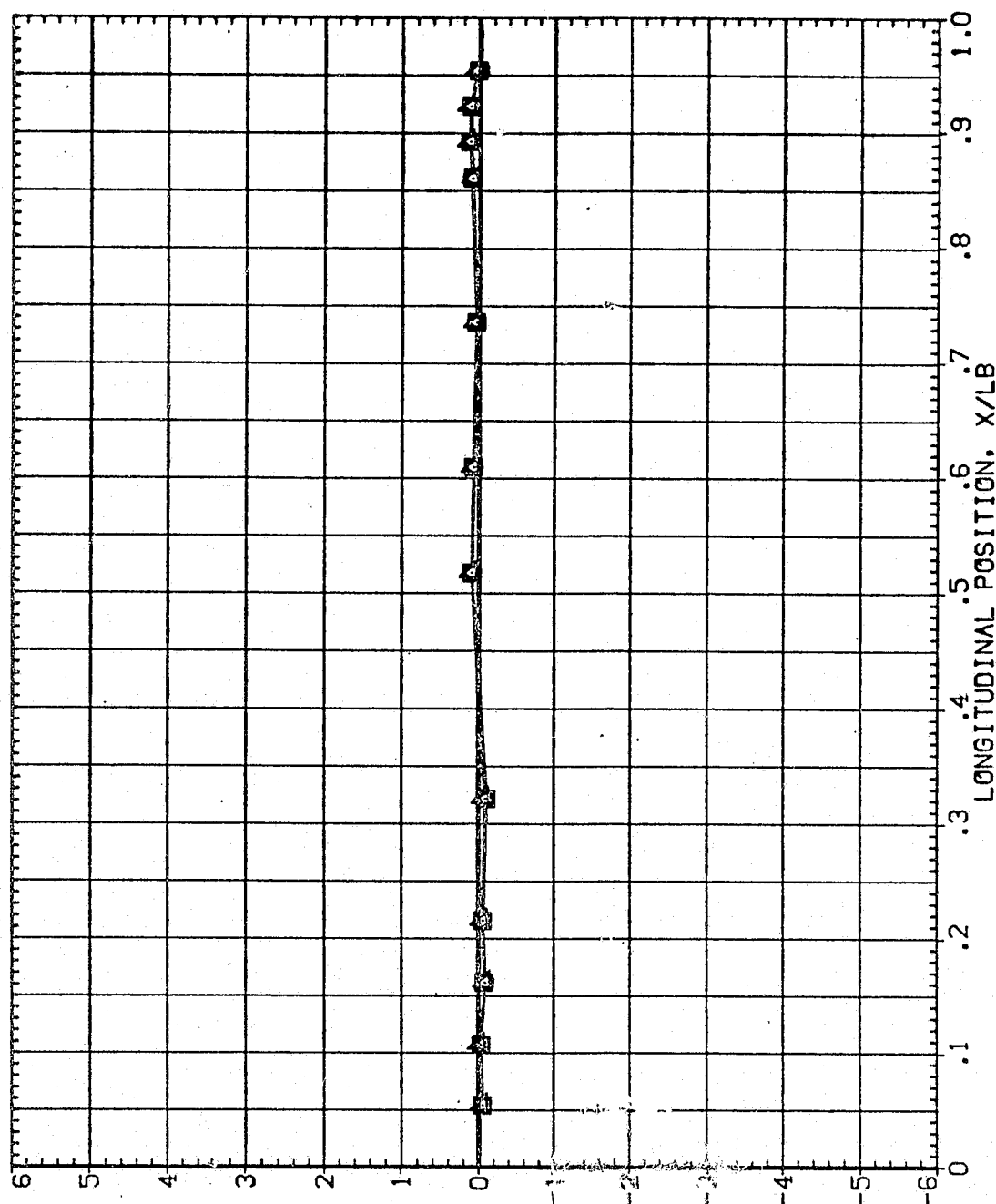


FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 1.96

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (01A061)

SYMBOL	ALPHA	BETA	PHI	PARAMETRIC VALUES	MGUNT	2.000	REFERENCE INFORMATION	SO. F7
○	51.000			.000			SREF	572.5550
□	54.130			.000			LREF	324.0000
◇	57.130						BREF	324.0000
△	60.130						XHRP	1086.4000
▽	63.130						YHRP	0.0000
							ZHRP	400.0000
							SCALE	.0030

LOCAL SIDE FORCE COEFFICIENT, DCYM/DIX/LB)

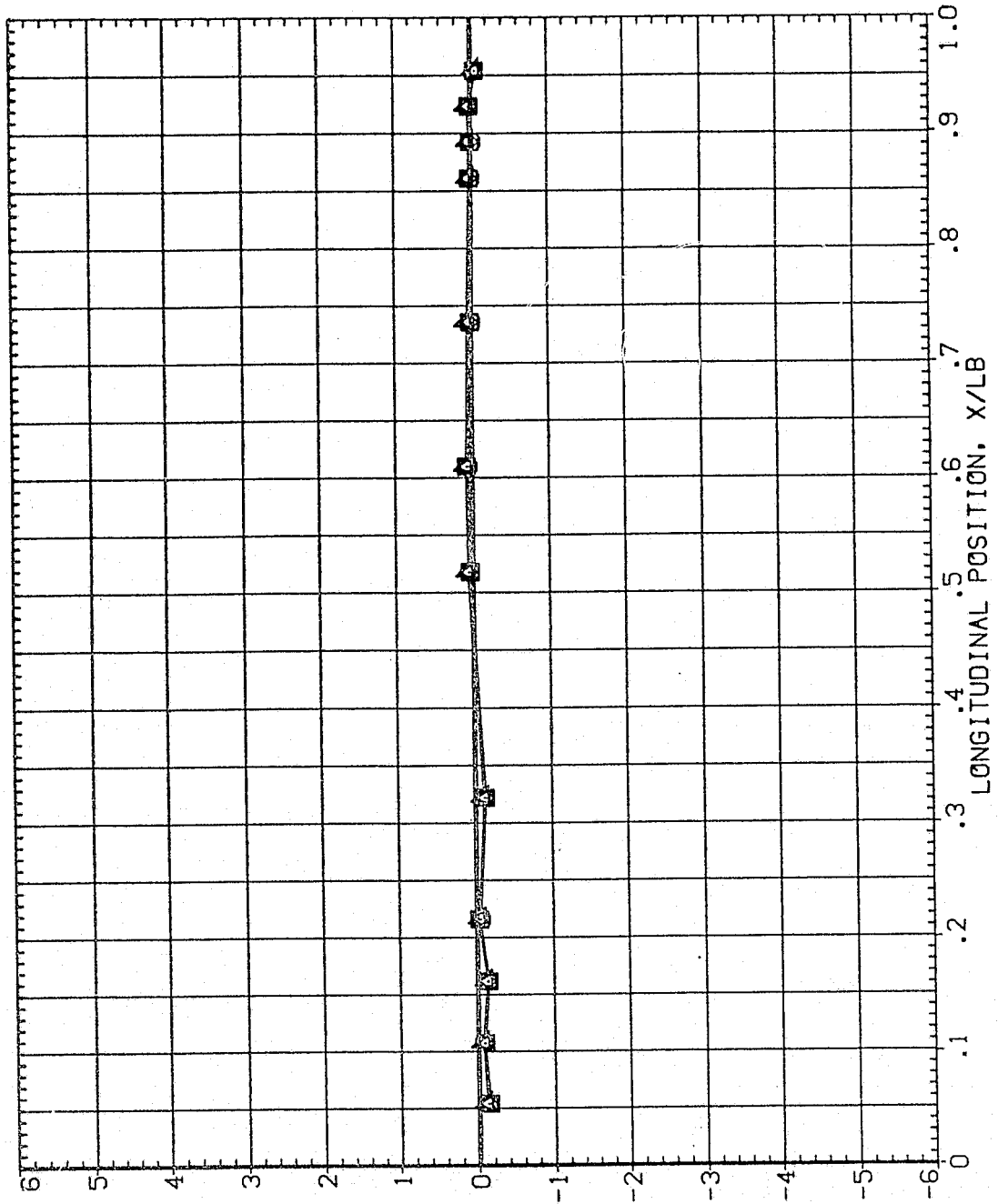


FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 3.48

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	66.130	PHI	.000	SREF 572.5550
◇	69.130		.000	LREF 324.0000
△	69.980			RREF 324.0000
▽	71.880			YMRP 1086.4000
	74.860			ZMRP 400.0000
				SCALE .0030

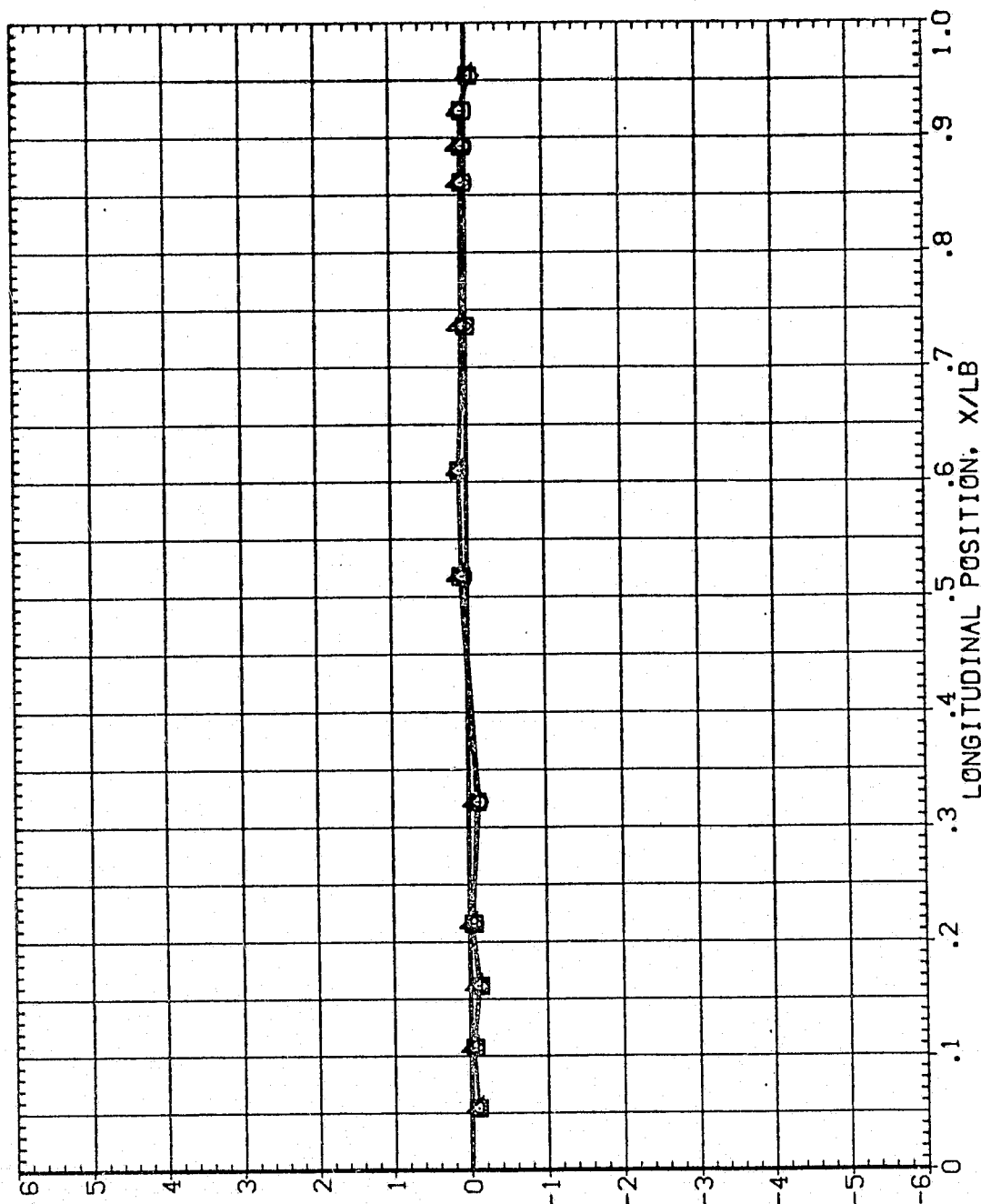


FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

CA/MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (01A061)

SYMBOL	ALPHA	BETA	PHI	PARAMETRIC VALUES	REFERENCE INFORMATION
□	77.880			.000	SREF 572.5550
◇	79.930			.000	LREF 324.0000
△	81.830				BREF 324.0000
▽	84.830				XMRP 1086.4000
	87.830				YMRP .0000
					ZMRP 400.0000
					SCALE .0030

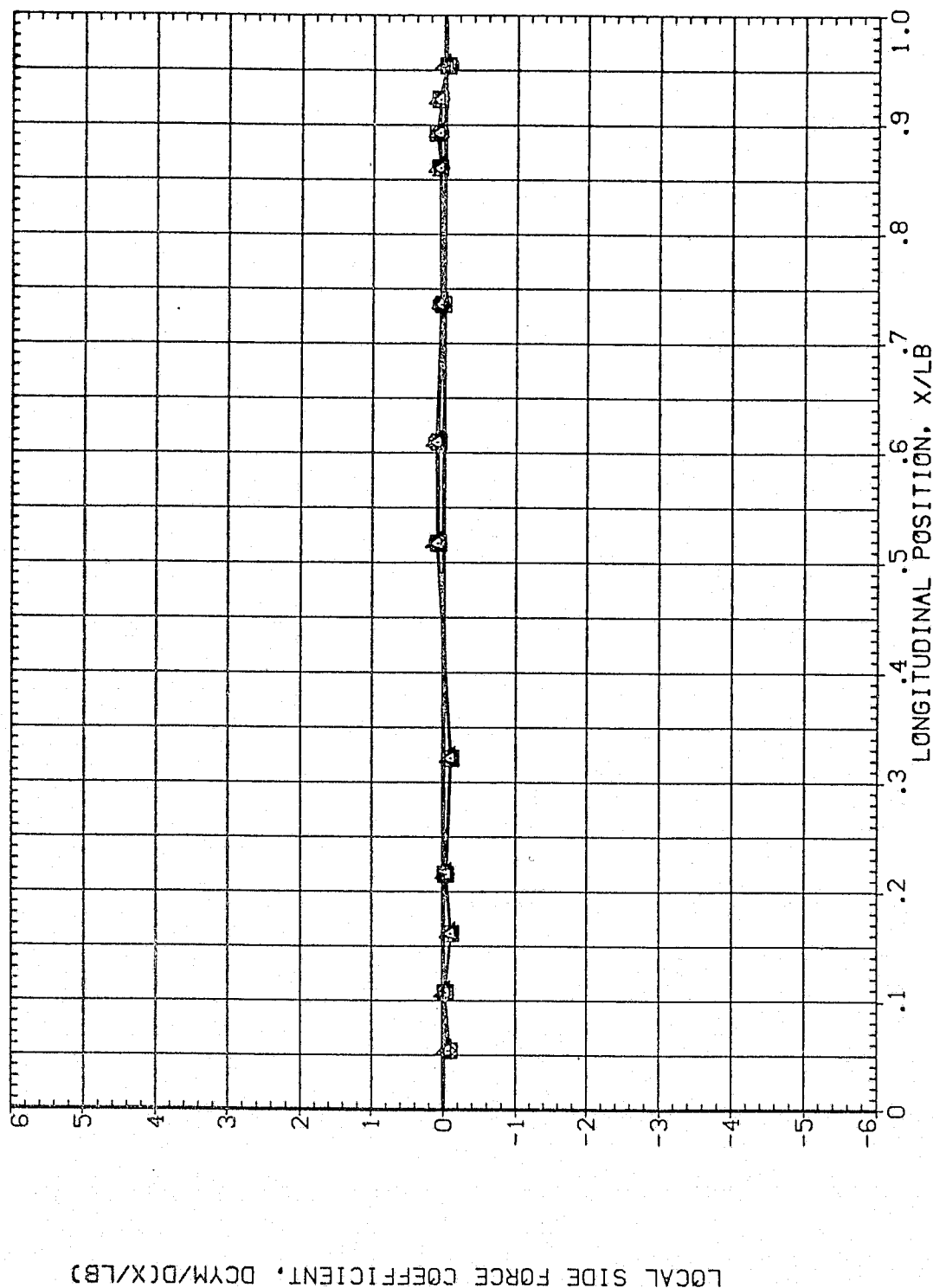


FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 3.48

SYMBOL ALPHA BETA PHI
 □ 89.830
 ◇ 91.850
 △ 94.850
 ▽ 97.830
 ▴ 99.750

PARAMETRIC VALUES
 HOUNT 2.000
 .000
 .000

REFERENCE INFORMATION
 SREF 572.5550
 LREF 324.0000
 BREF 324.0000
 XMRP 1066.4000
 YMRP 400.0000
 ZMRP 400.0000
 SCALE .0030

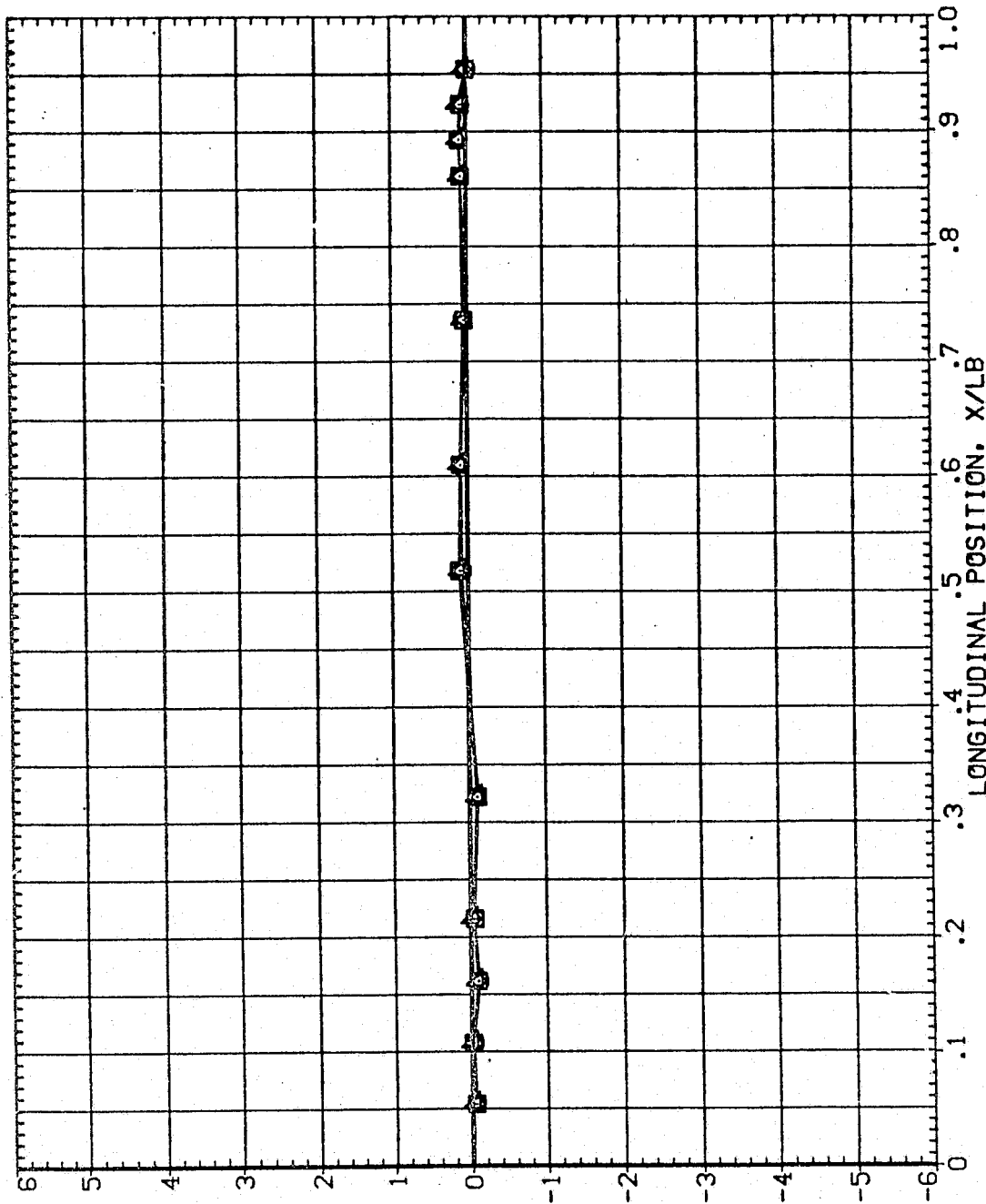


FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 3.48

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (01A061)

SYMBOL	ALPHA	BETA	PHI	PARAMETRIC VALUES	REFERENCE INFORMATION
□	51.000	.000	.000	2.000	SREF 572.5550
◇	54.130	.000	.000		LREF 324.0000
△	57.130				BREF 324.0000
▽	60.130				XHRP 1086.4000
▽	63.130				YHRP .0000
					ZHRP 400.0000
					SCALE .0030
					IN. FT
					INCHES
					IN. XT
					IN. YT
					IN. ZT

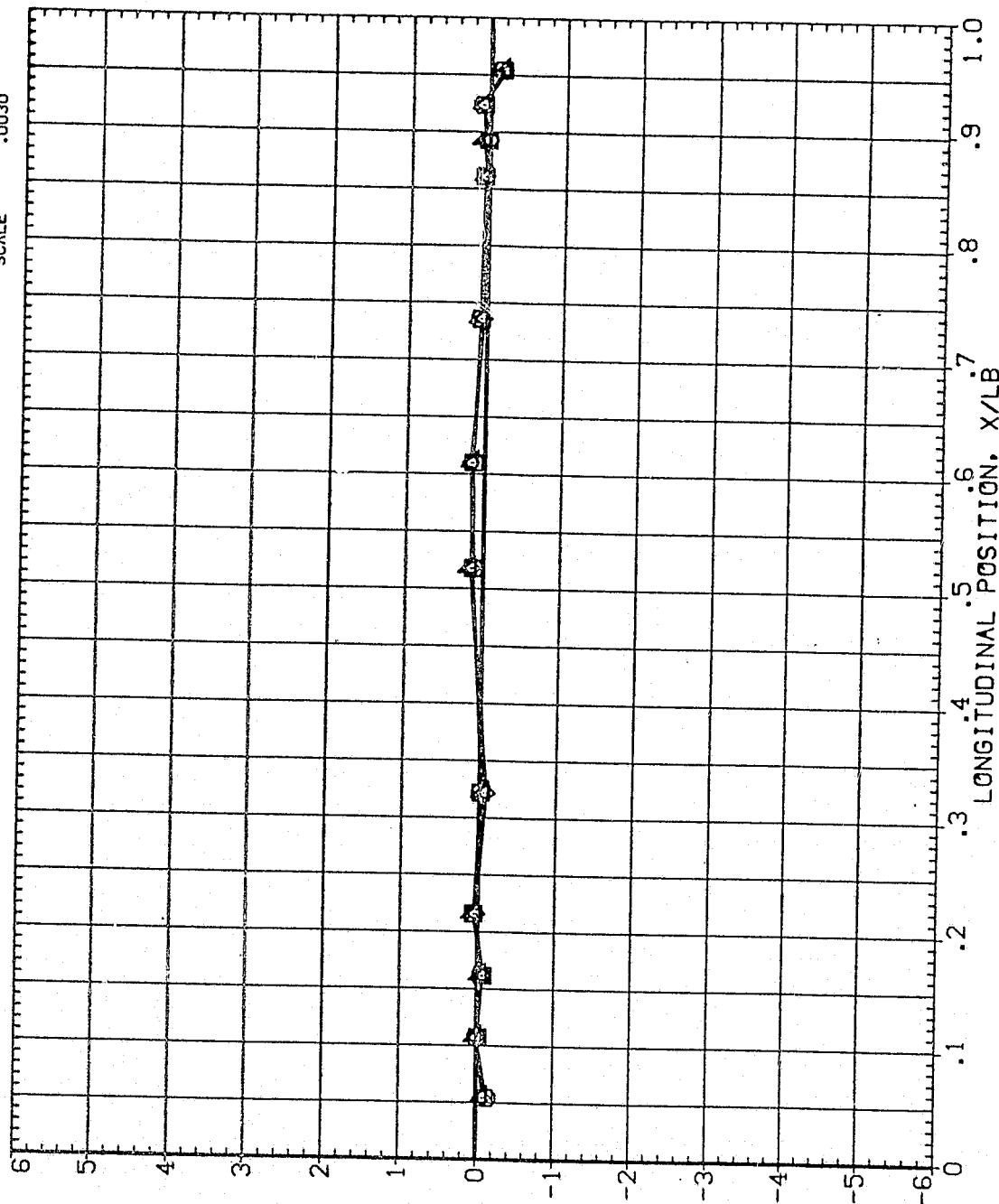


FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(M)MACH = 4.96

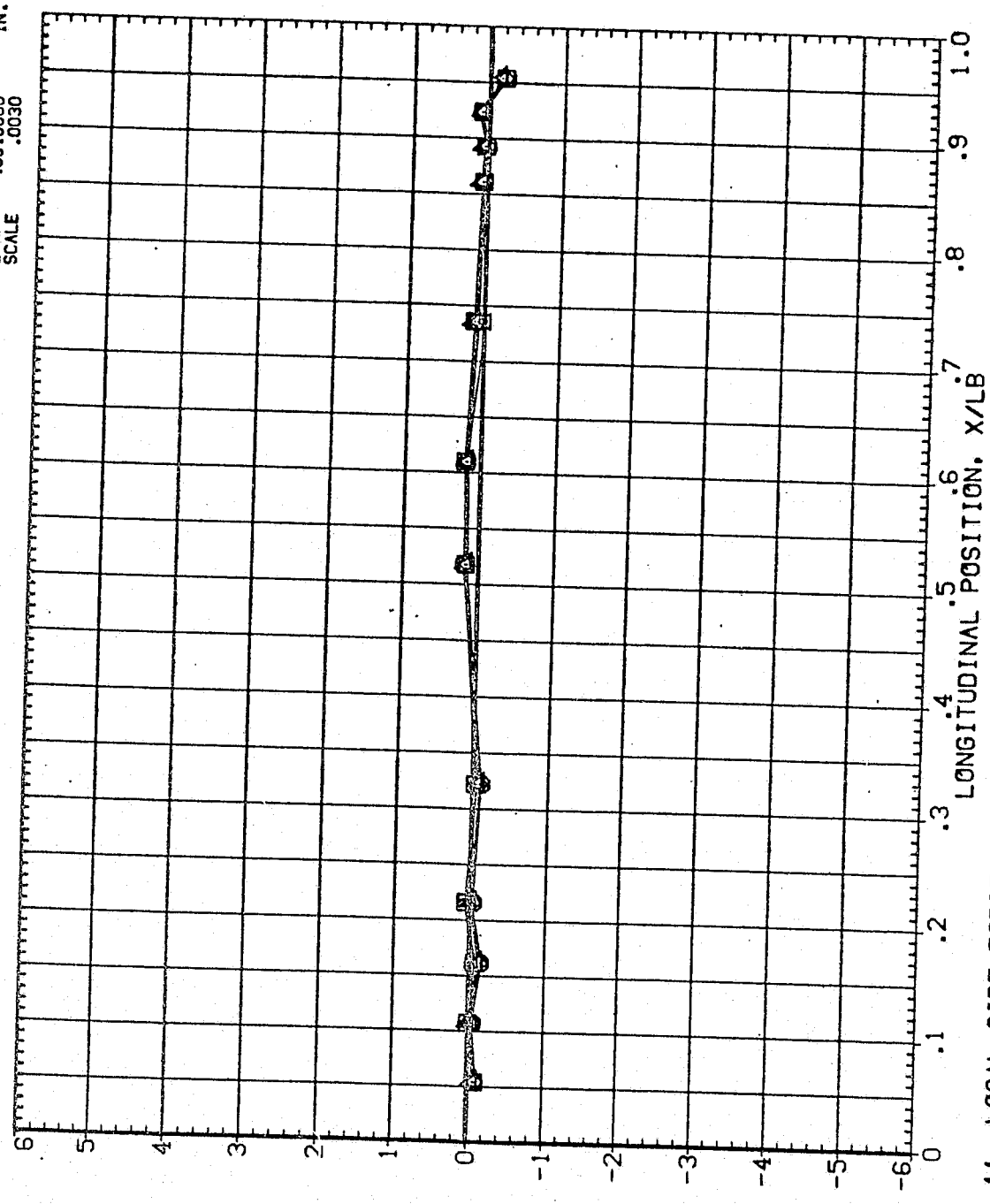
SYMBOL
 □
 ◇
 △
 ▽

ALPHA
 66.130
 69.130
 69.980
 71.880
 74.860

BETA
 PHI
 .000
 .000

PARAMETRIC VALUES
 MBUNT 2.000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030



LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB)

FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES
 (MACH = 4.96)

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2 (Q1A061)

REFERENCE INFORMATION

SREF	572.5550	SO. FT
LREF	324.0000	INCHES
BREF	324.0000	INCHES
YHRP	1086.4000	IN. XT
ZHRP	400.0000	IN. YT
SCALE	.0030	IN. ZT

PARAMETRIC VALUES

ALPHA	BETA	PHI	MOUNT
77.880			2.000
79.930			
81.830			
84.830			
87.830			

SYMBOL

□ ◇ △ ▽

LOCAL SIDE FORCE COEFFICIENT, DCYM/DCX/LB)

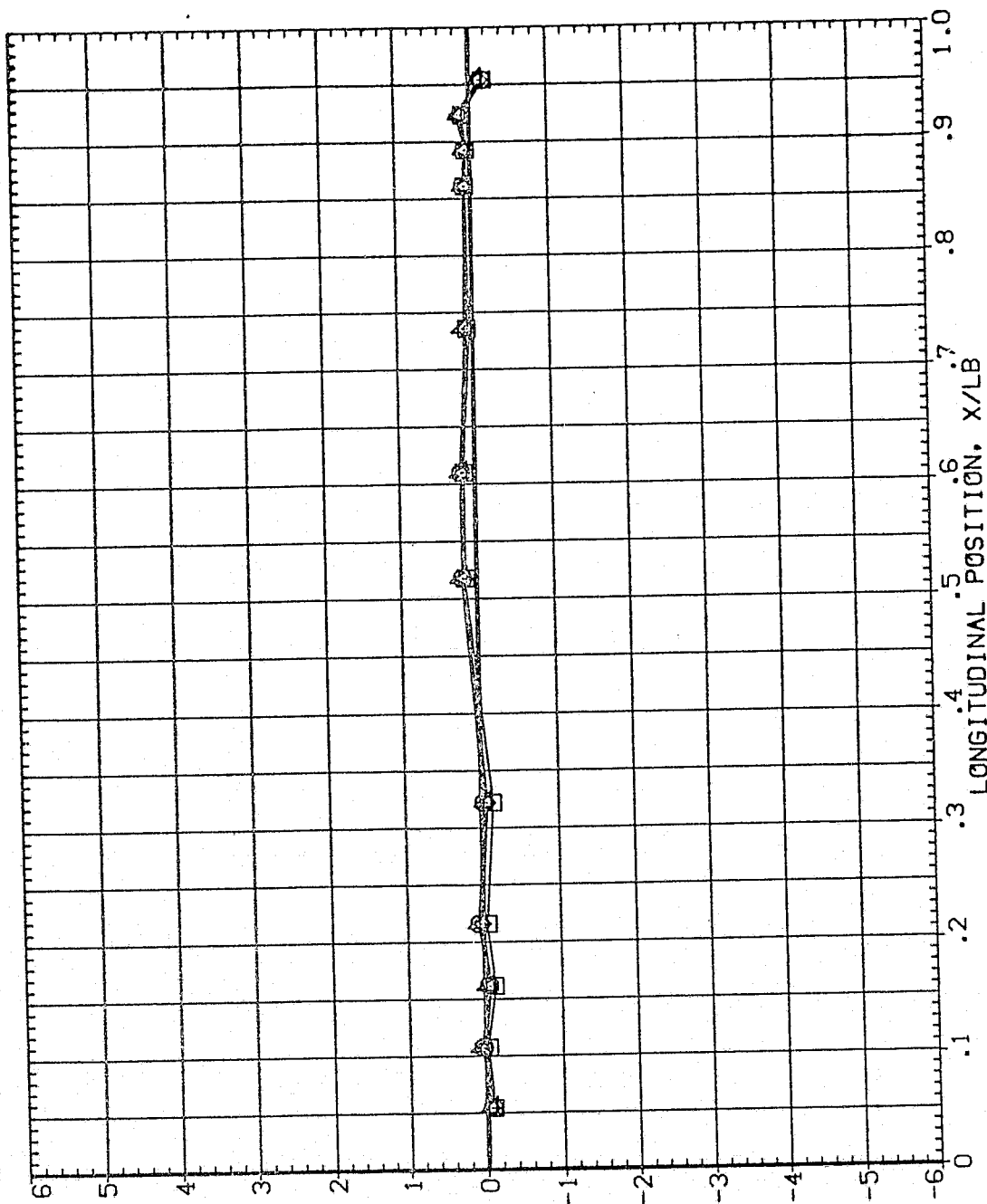


FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES

(A)MACH = 4.96

SYMBOL
 ○ □ △ ▽

ALPHA
 89.830
 91.850
 94.850
 97.830
 99.750

BETA
 PHI

PARAMETRIC VALUES
 .000 MOUNT 2.000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XHRP 1086.4000 IN. XT
 YHRP .0000 IN. YT
 ZHRP 400.0000 IN. ZT
 SCALE .0030

LOCAL SIDE FORCE COEFFICIENT, DCYM/DC(X/LB)

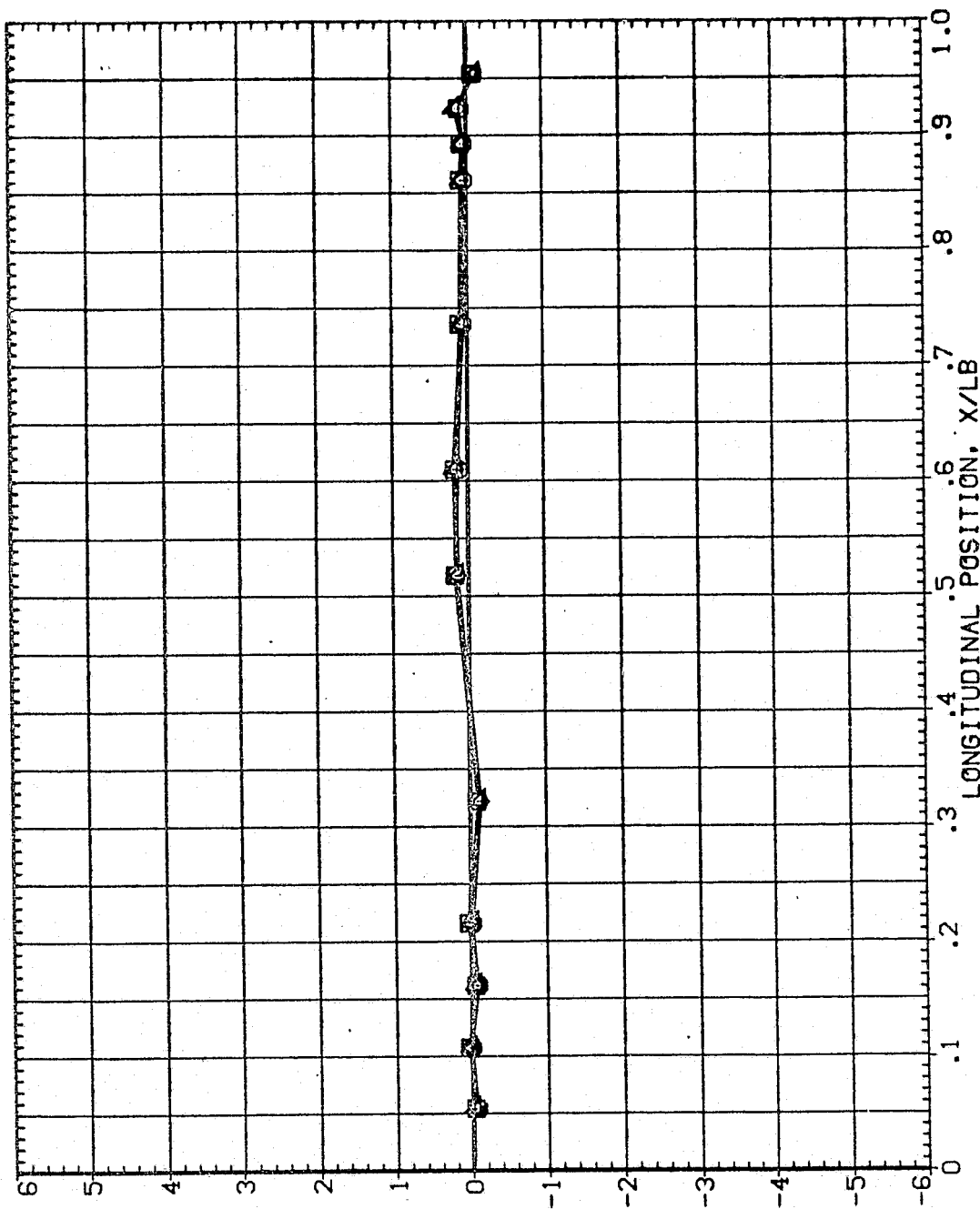
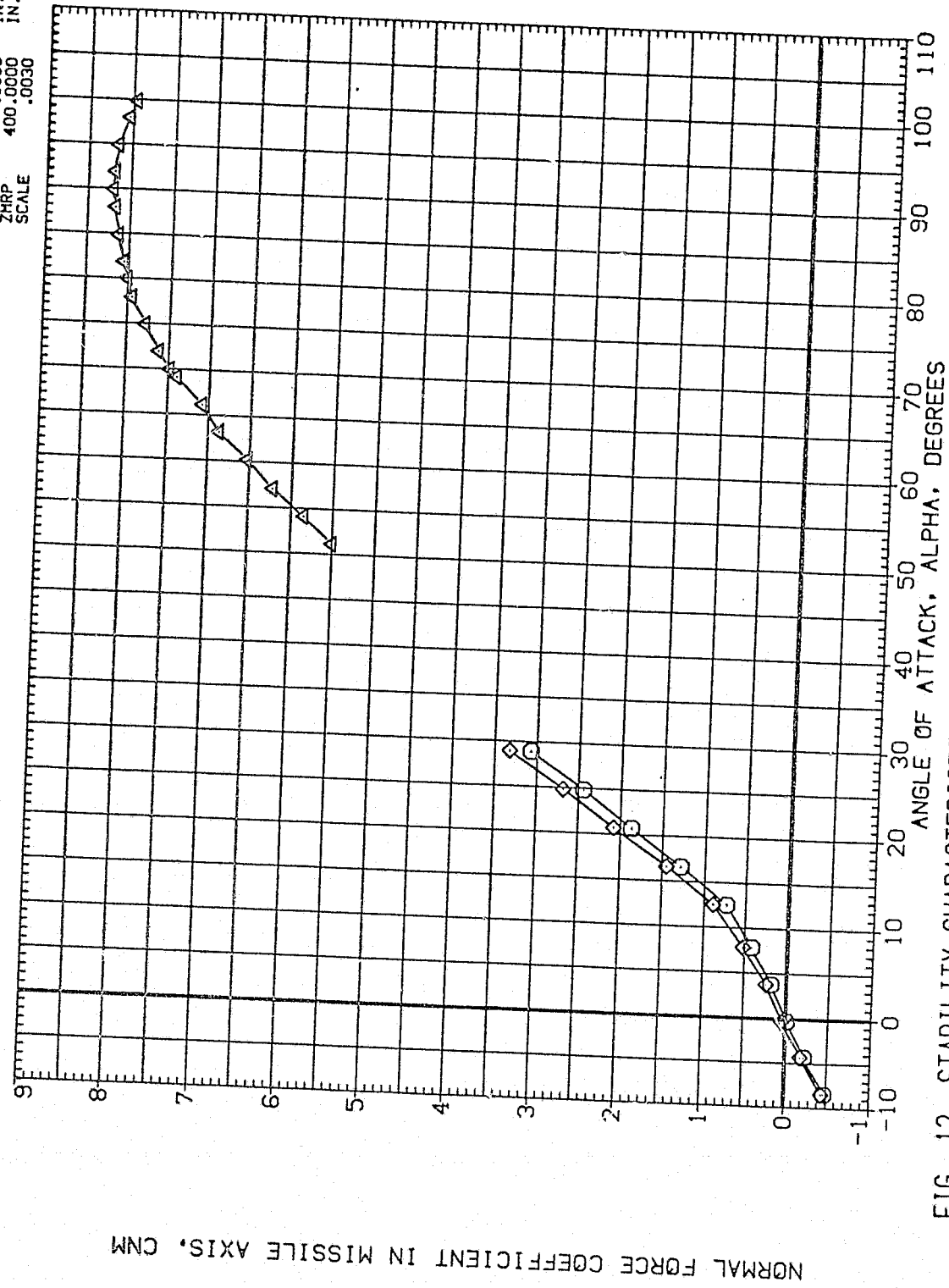


FIG. 11 LOCAL SIDE FORCE DISTRIBUTION - T2 WITHOUT PROTUBERANCES
 (A)MACH = 4.96

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (J1A001) MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK. T1
 (J1A003) DATA NOT AVAILABLE
 (J1A005) MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK. T1
 (J1A015) MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK. T2

BETA .PHI
 .000 .000
 .000 45.000
 .000 90.000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030



NORMAL FORCE COEFFICIENT IN MISSILE AXIS, CNM

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)
 (MACH = 1.96)

DATA SET SYMBOL
(J1A007)
(J1A009)
(J1A011)
(J1A015)

CONFIGURATION DESCRIPTION
DATA NOT AVAILABLE
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
DATA NOT AVAILABLE
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

BETA PHI
.000 135.000
.000 180.000
.000 225.000
.000 .000

REFERENCE INFORMATION
SREF 572.5550 INCHES
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. YI
YMRP .0000 IN. YI
ZMRP 400.0000 IN. ZI
SCALE .0030

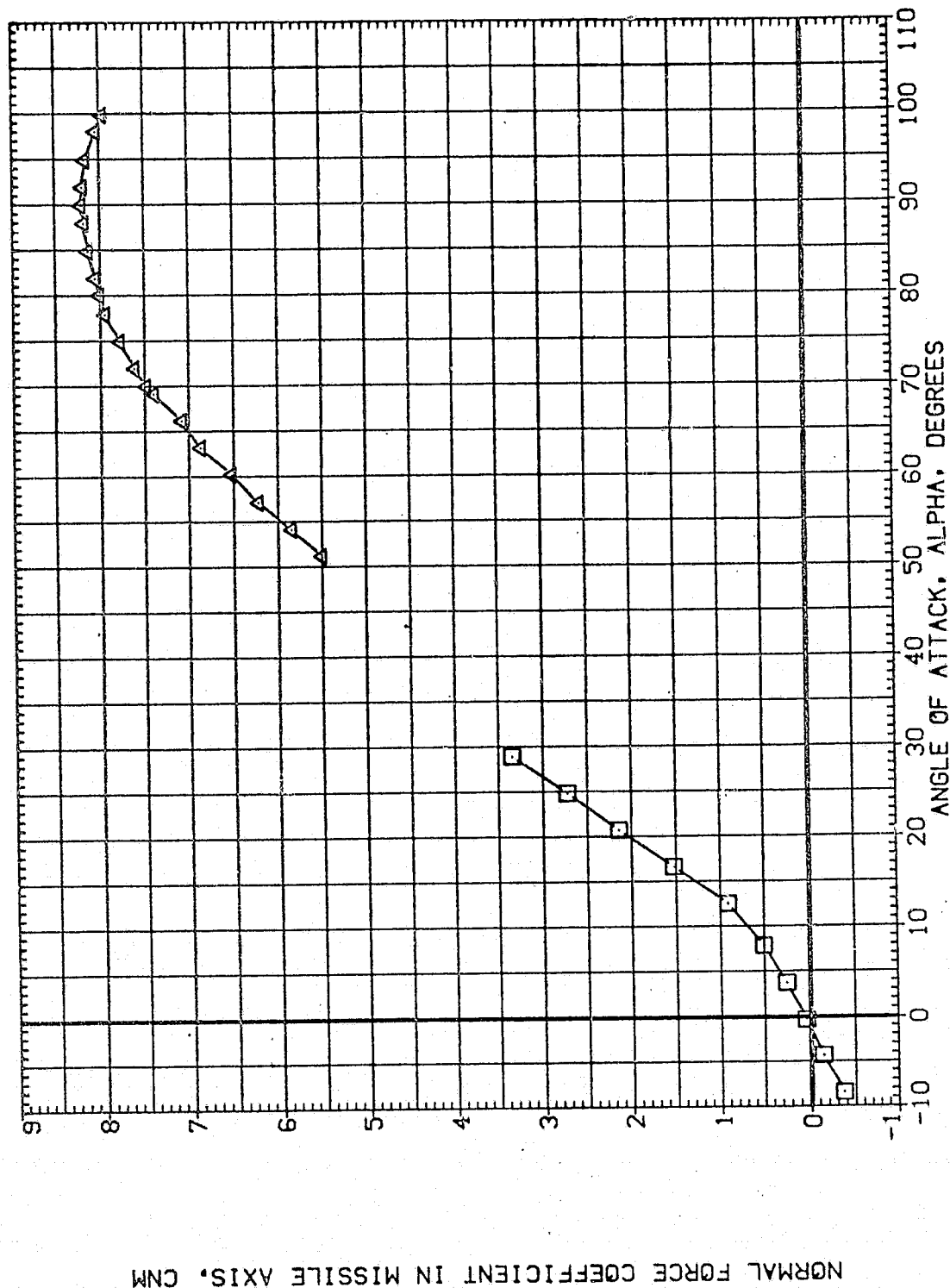


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(A)MACH = 1.96

DATA SET SYMBOL
(J1A013)
(J1A018)
(J1A015)

CONFIGURATION DESCRIPTION
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
DATA NOT AVAILABLE
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

BETA PHI
.000 270.000
.000 315.000
.000 .000

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XHRP 1086.4000 IN. XT
YHRP .0000 IN. YT
ZHRP 400.0000 IN. ZT
SCALE .0030

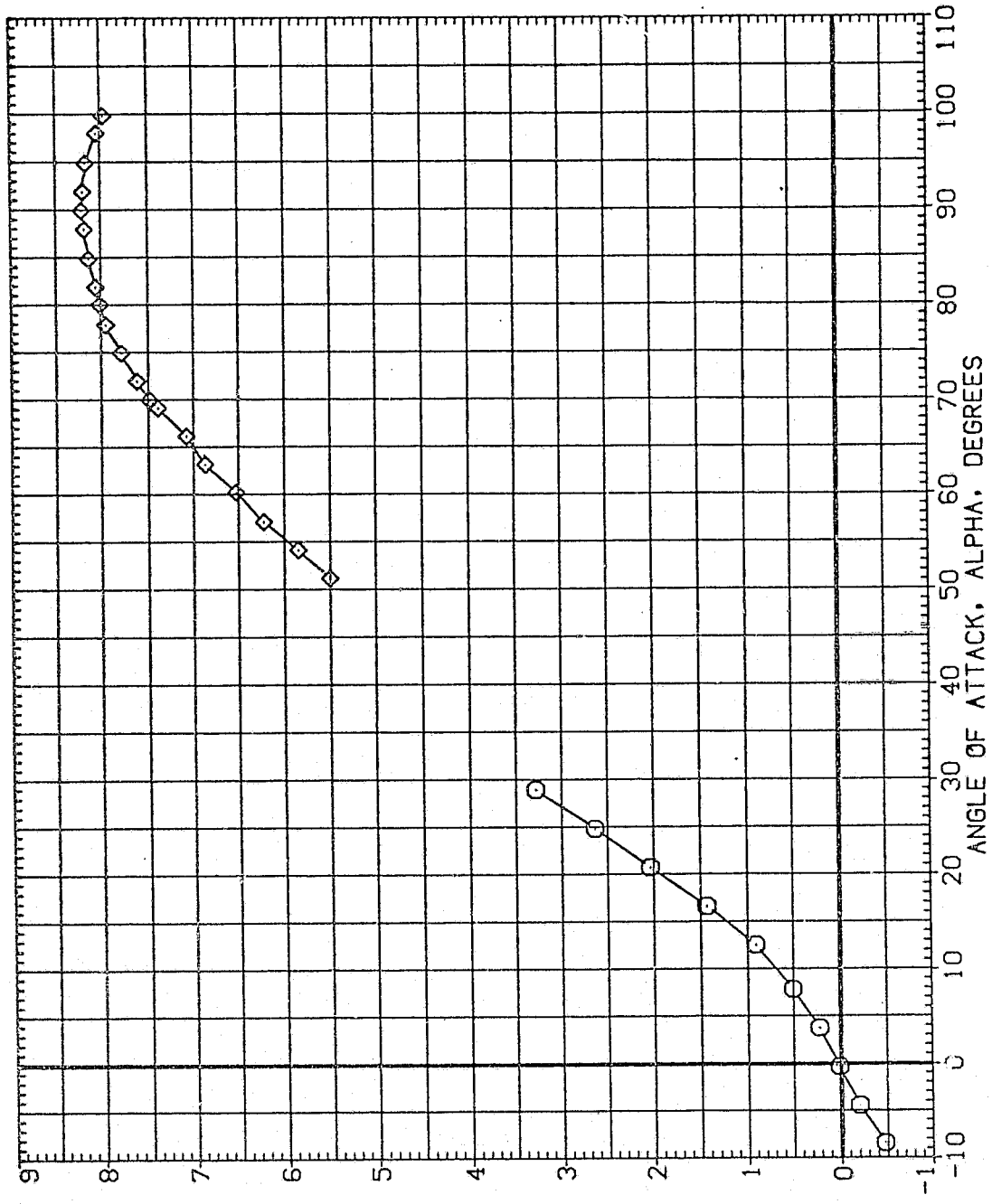


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

CAJ MACH = 1.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A001)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	.000	SREF 572.5530 SQ. FT
(J1A003)	DATA NOT AVAILABLE	.000	45.000	LREF 324.0000 INCHES
(J1A005)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	90.000	BREF 324.0000 INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	XMRP 1086.4000 IN. XT
				YMRP .0000 IN. YT
				ZMRP 400.0000 IN. ZT
				SCALE .0030

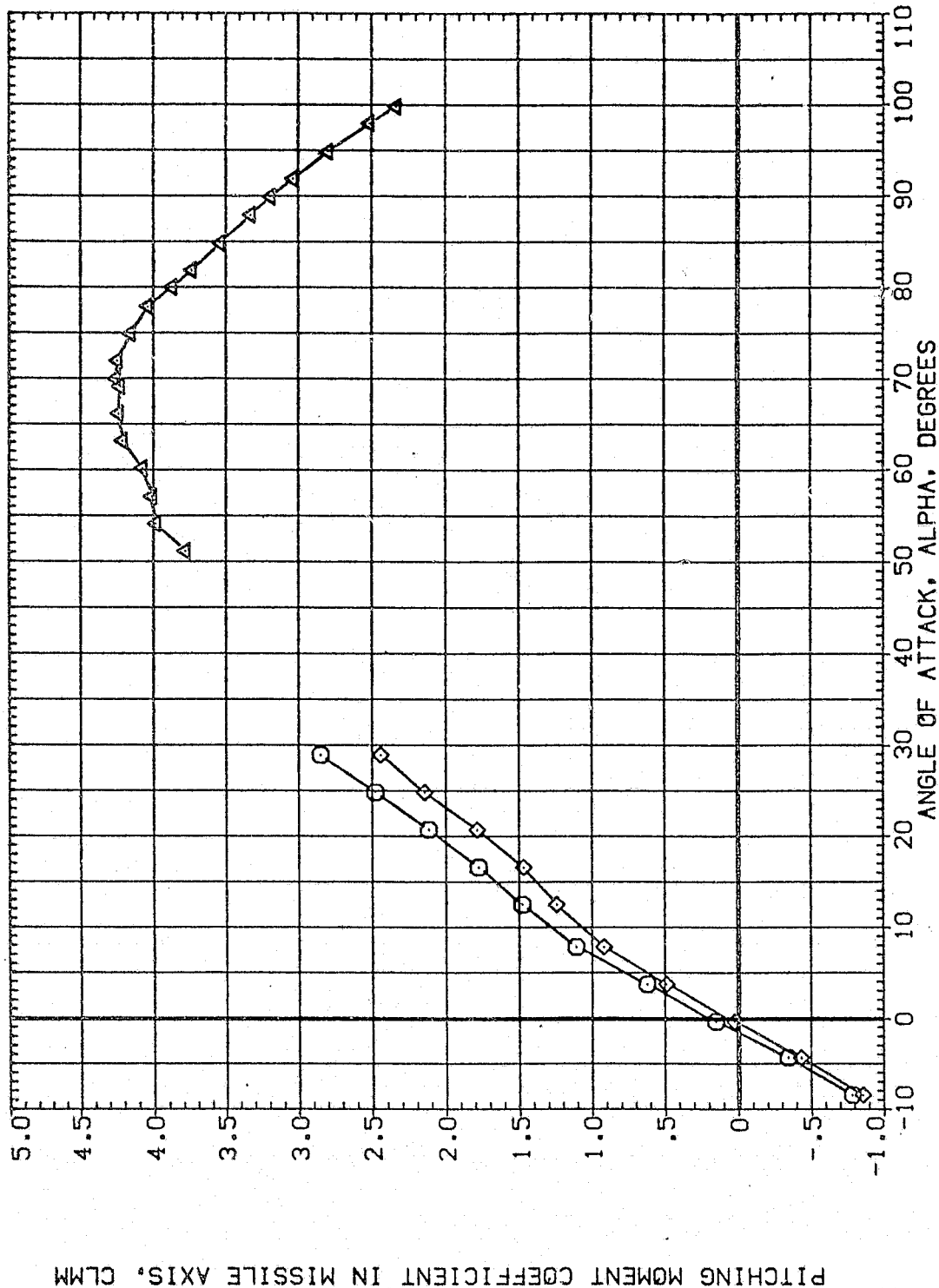


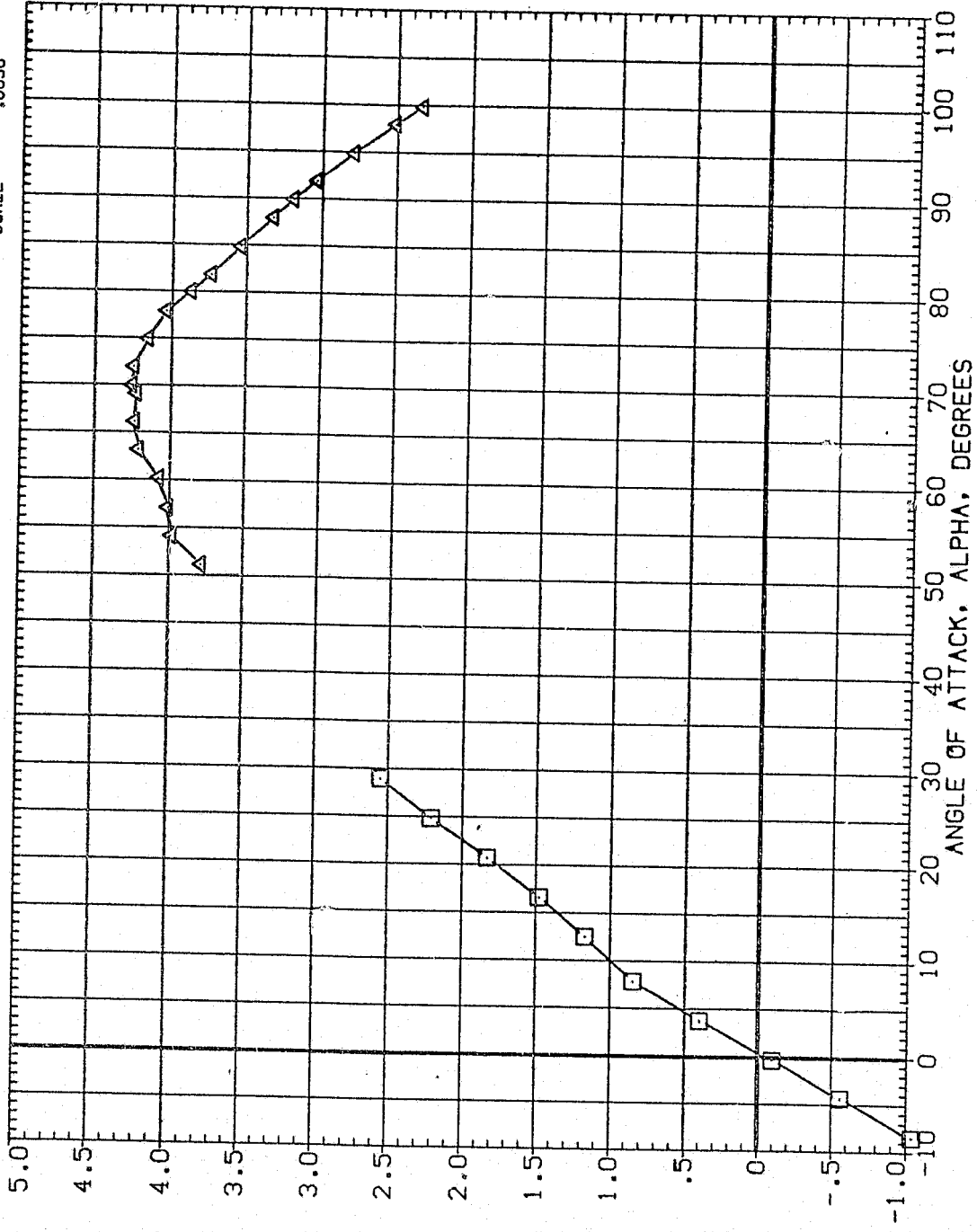
FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(M)MACH = 1.96

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (J1A007) DATA NOT AVAILABLE
 (J1A009) HSEC 596 (TA-2FJ) MCR0200 EXTERNAL TANK, T1
 (J1A011) DATA NOT AVAILABLE
 (J1A015) HSEC 596 (TA-2FJ) MCR0200 EXTERNAL TANK, T2

BETA PHI
 .000 135.000
 .000 180.000
 .000 225.000

REFERENCE INFORMATION
 SREF 572.5550 50. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030



PITCHING MOMENT COEFFICIENT IN MISSILE AXIS, CLMM

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)
 CAJMACH = 1.96 PAGE 2709

REPRODUCIBILITY OF THE
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REFERENCE INFORMATION

SREF	572.5530	SO. FT
LREF	324.0000	INCHES
BREF	324.0000	INCHES
XHRP	1086.4000	IN. XT
YHRP	.0000	IN. YT
ZHRP	400.0000	IN. ZT
SCALE	.0030	

BETA PHI

BETA	.000	270.000
PHI	.000	315.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(J1A013)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
(J1A018)	DATA NOT AVAILABLE
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

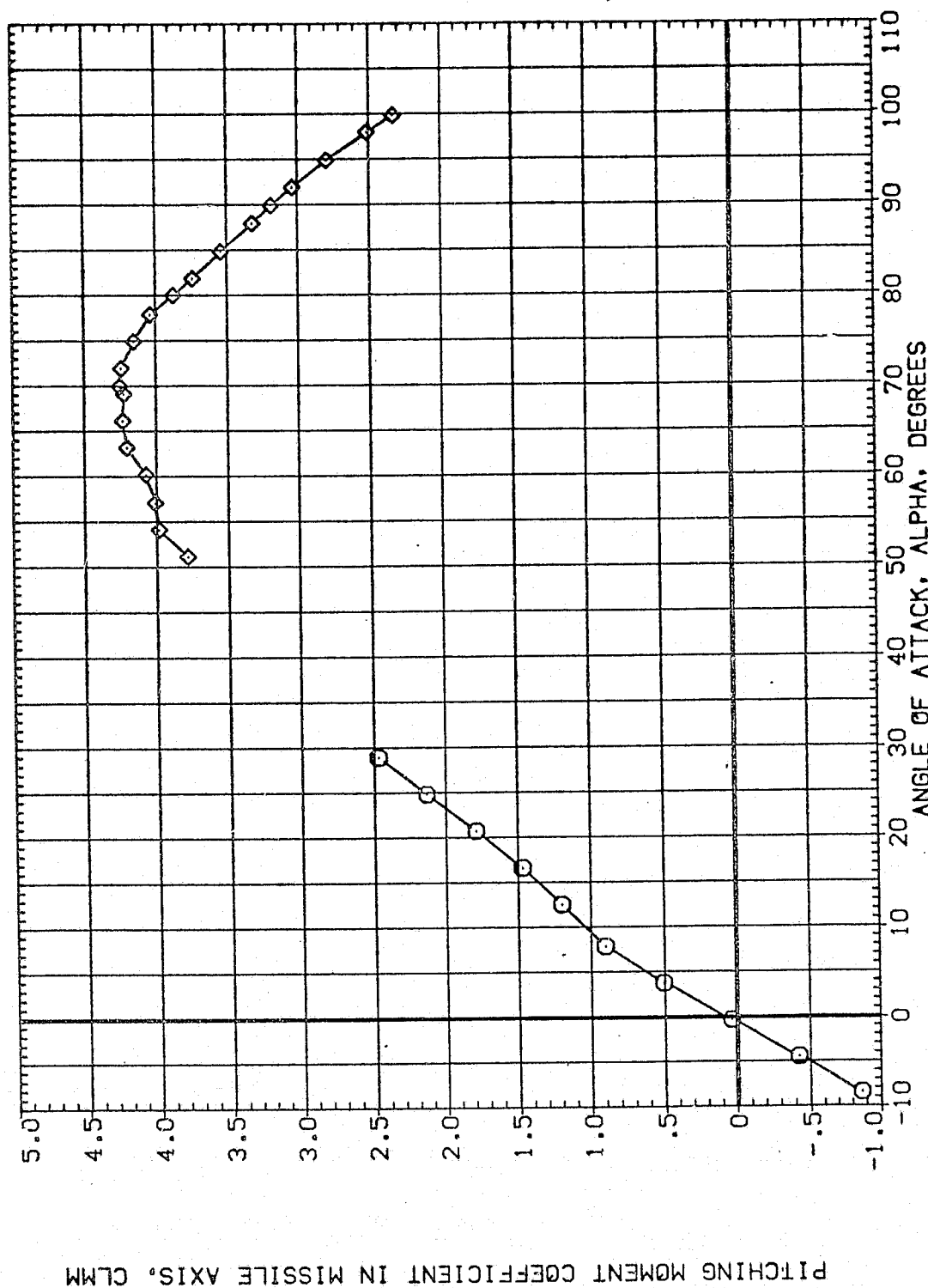
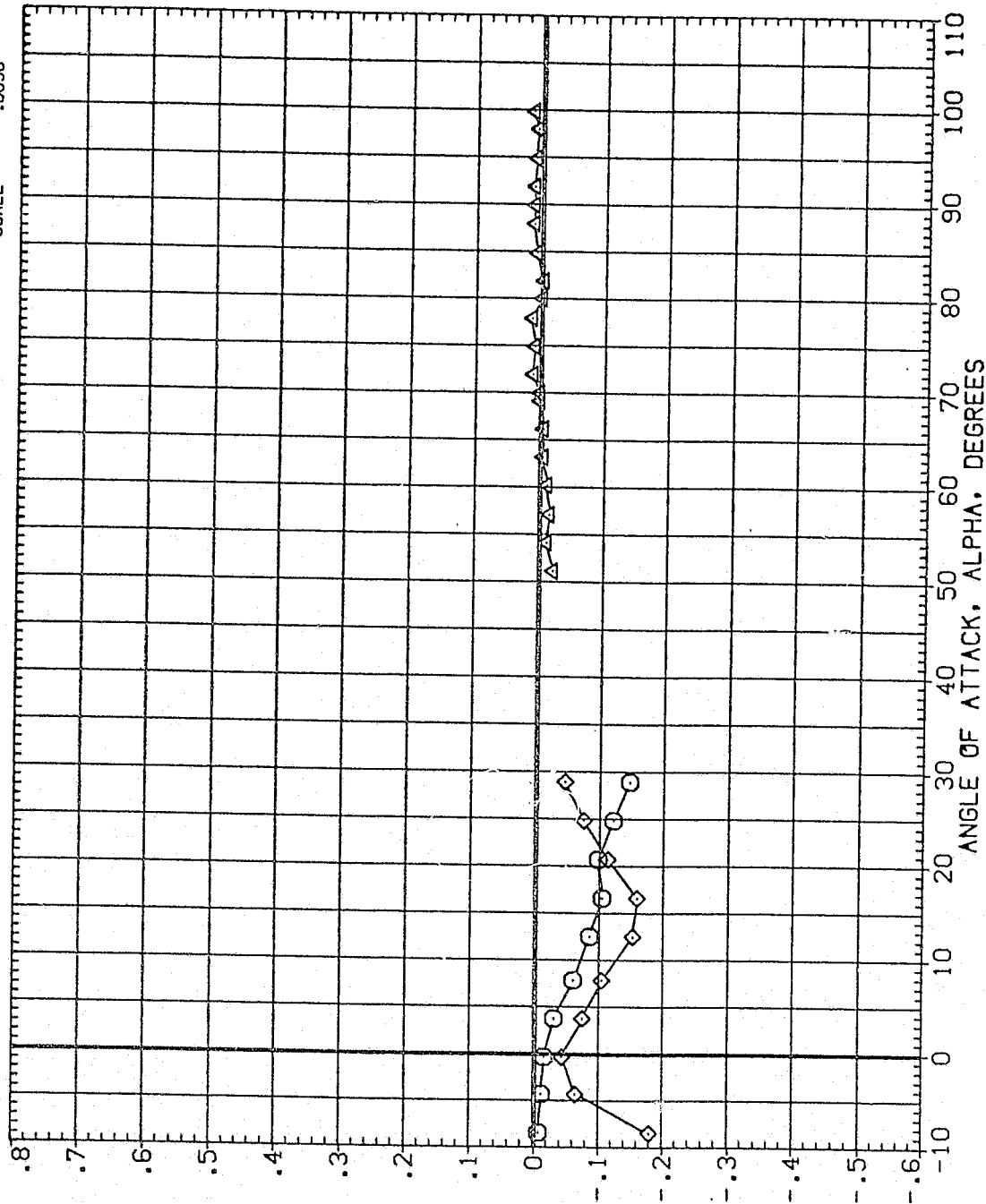


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(A)MACH = 1.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A001)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	.000	SREF 572.5550 SQ. FT
(J1A003)	DATA NOT AVAILABLE	.000	45.000	LREF 324.0000 INCHES
(J1A005)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	90.000	BREF 324.0000 INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	XMRP 1086.4000 IN. XT
				YMRP .0000 IN. YT
				ZMRP 400.0000 IN. ZT
				SCALE .0030



SIDE FORCE COEFFICIENT IN MISSILE AXIS, CYM

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(A)MACH = 1.96

DATA SET SYMBOL

(J1A007)
(J1A009)
(J1A011)
(J1A015)

CONFIGURATION DESCRIPTION

DATA NOT AVAILABLE
HSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T1
DATA NOT AVAILABLE
HSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T2

BETA

.000
.000
.000
.000

PHI

135.000
180.000
225.000

REFERENCE INFORMATION

SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. X1
YMRP .0000 IN. Y1
ZMRP 400.0000 IN. Z1
SCALE .0030

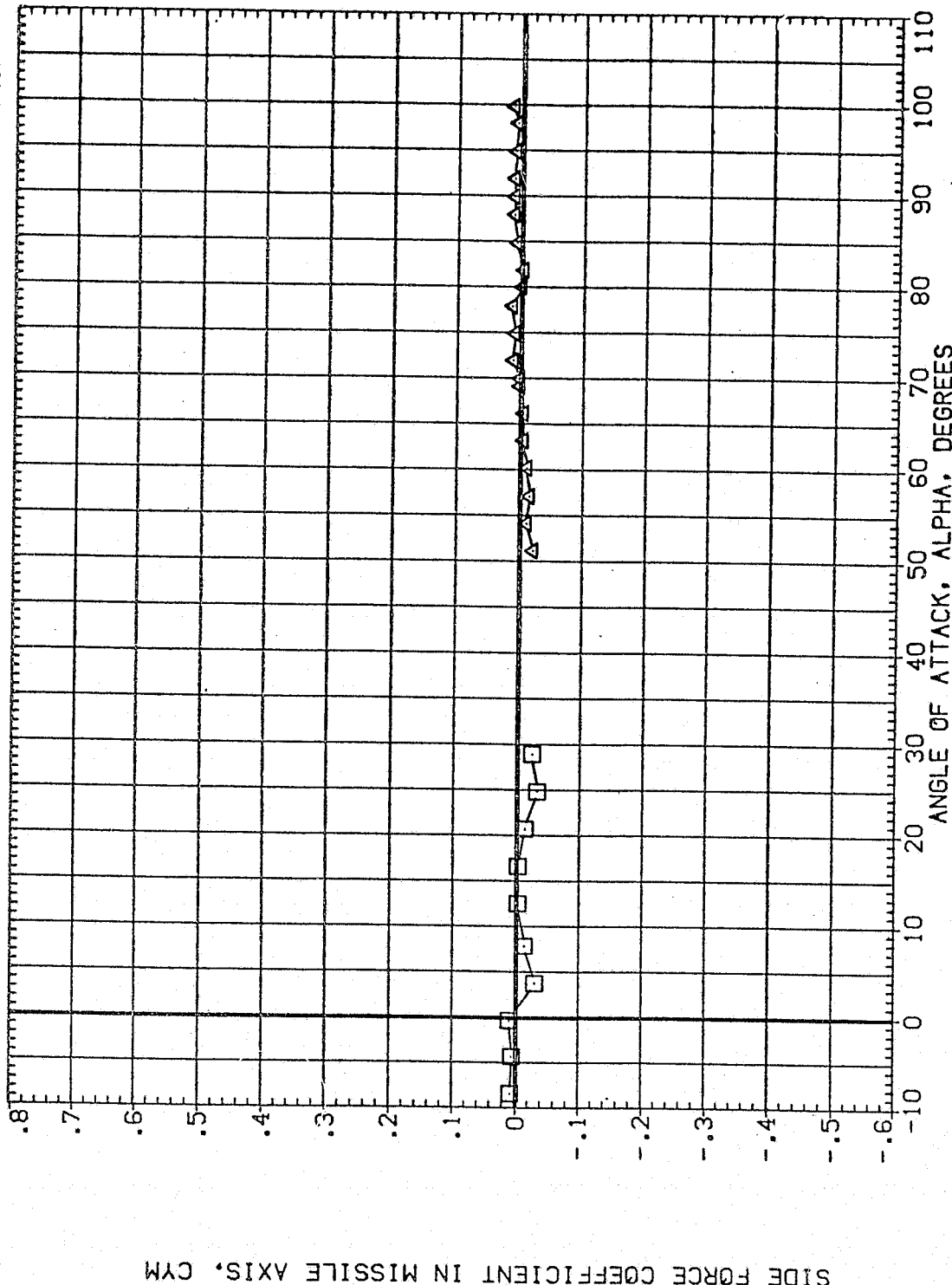
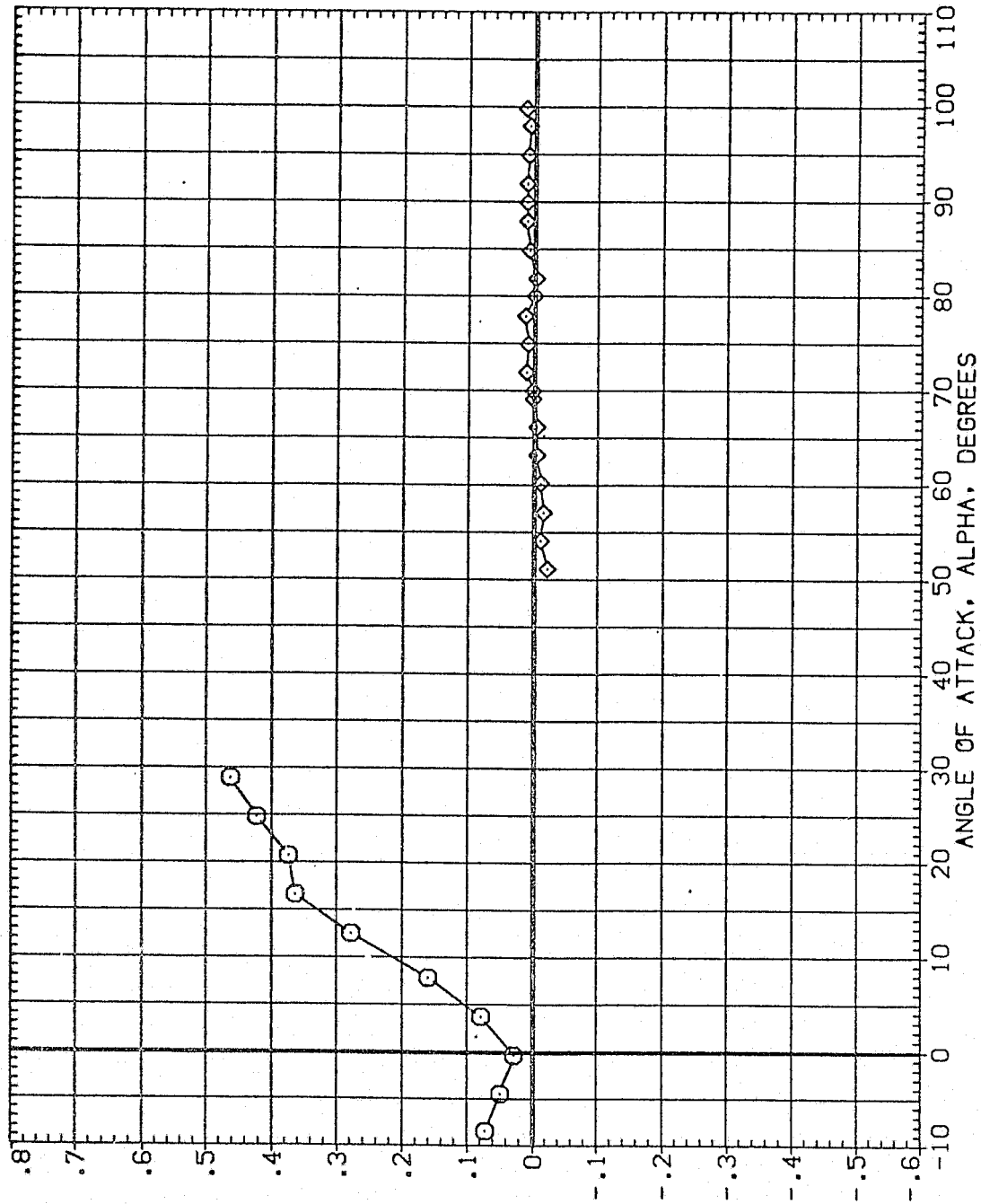


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

CA/MACH = 1.96

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA PHI REFERENCE INFORMATION

(J1A013)	HSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T1	.000	270.000	SREF	572.5530	50. FT
(J1A018)	DATA NOT AVAILABLE	.000	315.000	LREF	324.0000	INCHES
(J1A015)	HSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T2	.000	.000	BREF	324.0000	IN. XT
				XMRP	1086.4000	IN. YT
				YMRP	.0000	IN. ZT
				ZMRP	400.0000	IN. ZT
				SCALE	.0030	



SIDE FORCE COEFFICIENT IN MISSILE AXIS, CYM

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(A)MACH = 1.96

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

(J1A001) MSEC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
 (J1A003) DATA NOT AVAILABLE
 (J1A005) MSEC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
 (J1A015) MSEC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

BETA

.000
 .000
 .000
 .000

PHI

.000
 45.000
 90.000
 .000

REFERENCE INFORMATION

SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

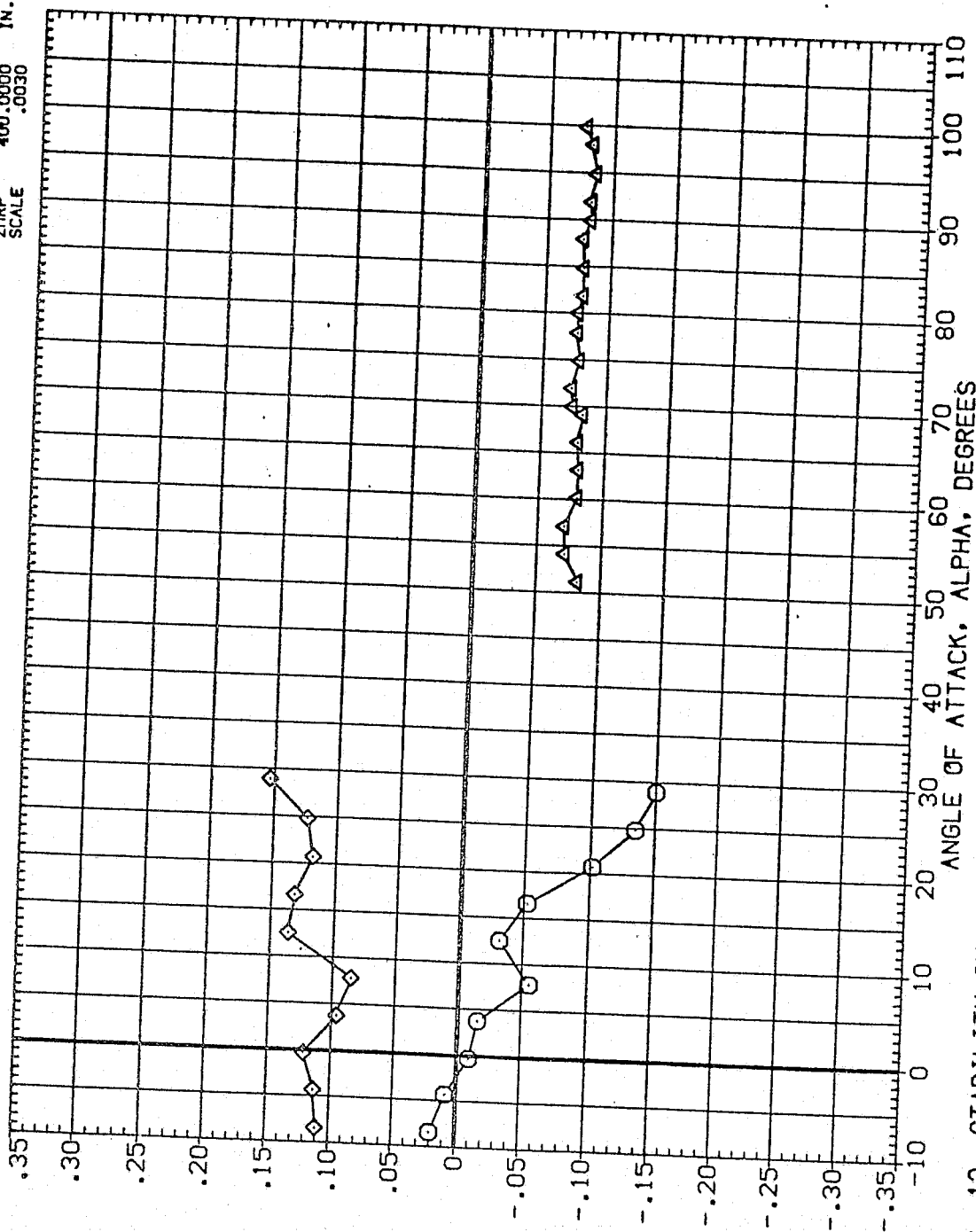


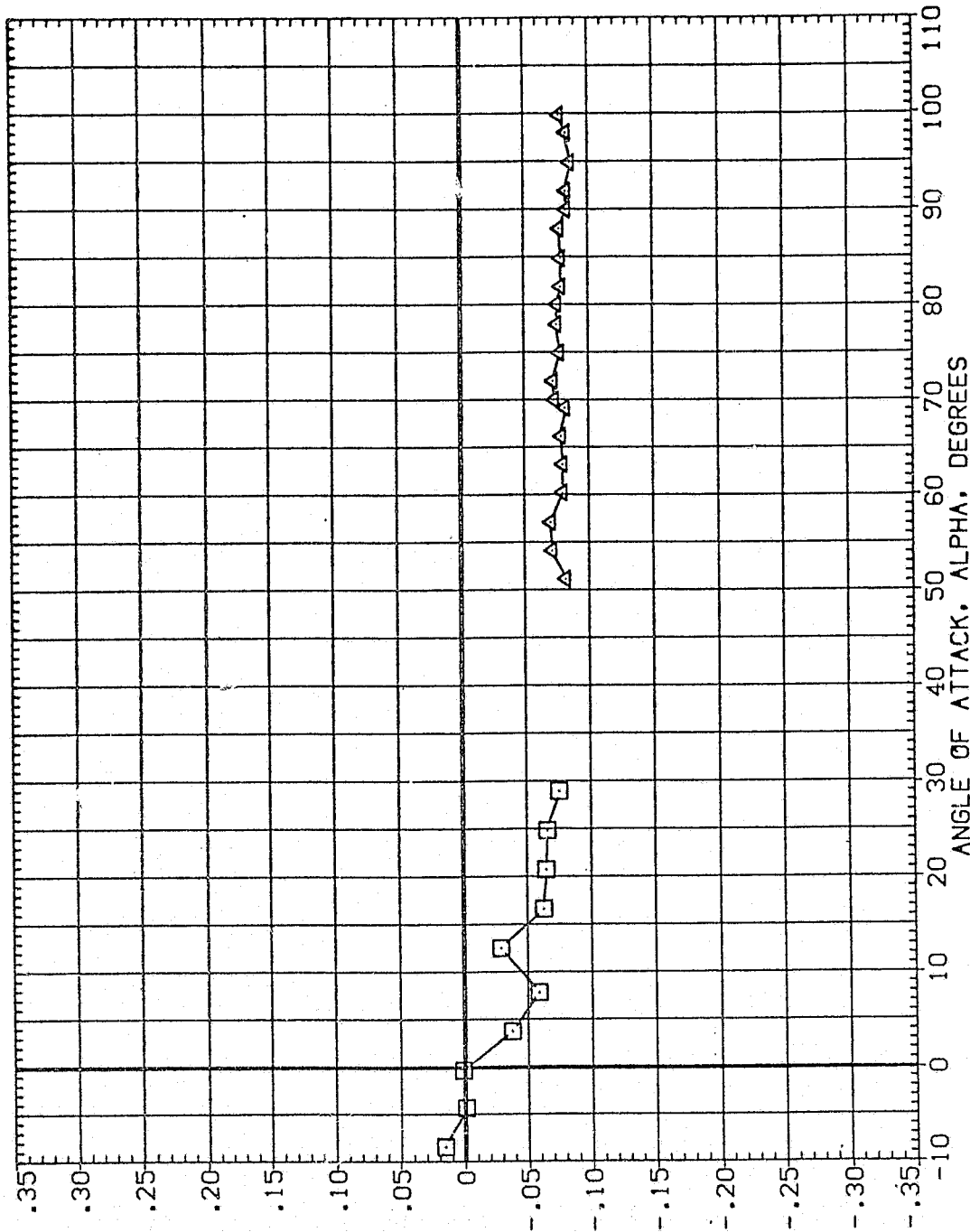
FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)
 (M)MACH = 1.96

DATA SET SYMBS
(J1A007)
(J1A009)
(J1A011)
(J1A015)

CONFIGURATION DESCRIPTION
DATA NOT AVAILABLE
HSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
DATA NOT AVAILABLE
HSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

BETA PHI
.000 135.000
.000 180.000
.000 225.000
.000 .000

REFERENCE INFORMATION
SREF 572.5550 50. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XHRP 1086.4000 IN. XT
YHRP .0000 IN. YT
ZHRP 400.0000 IN. ZT
SCALE .0030



YAWING MOMENT COEFFICIENT IN MISSILE AXIS, CYM

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

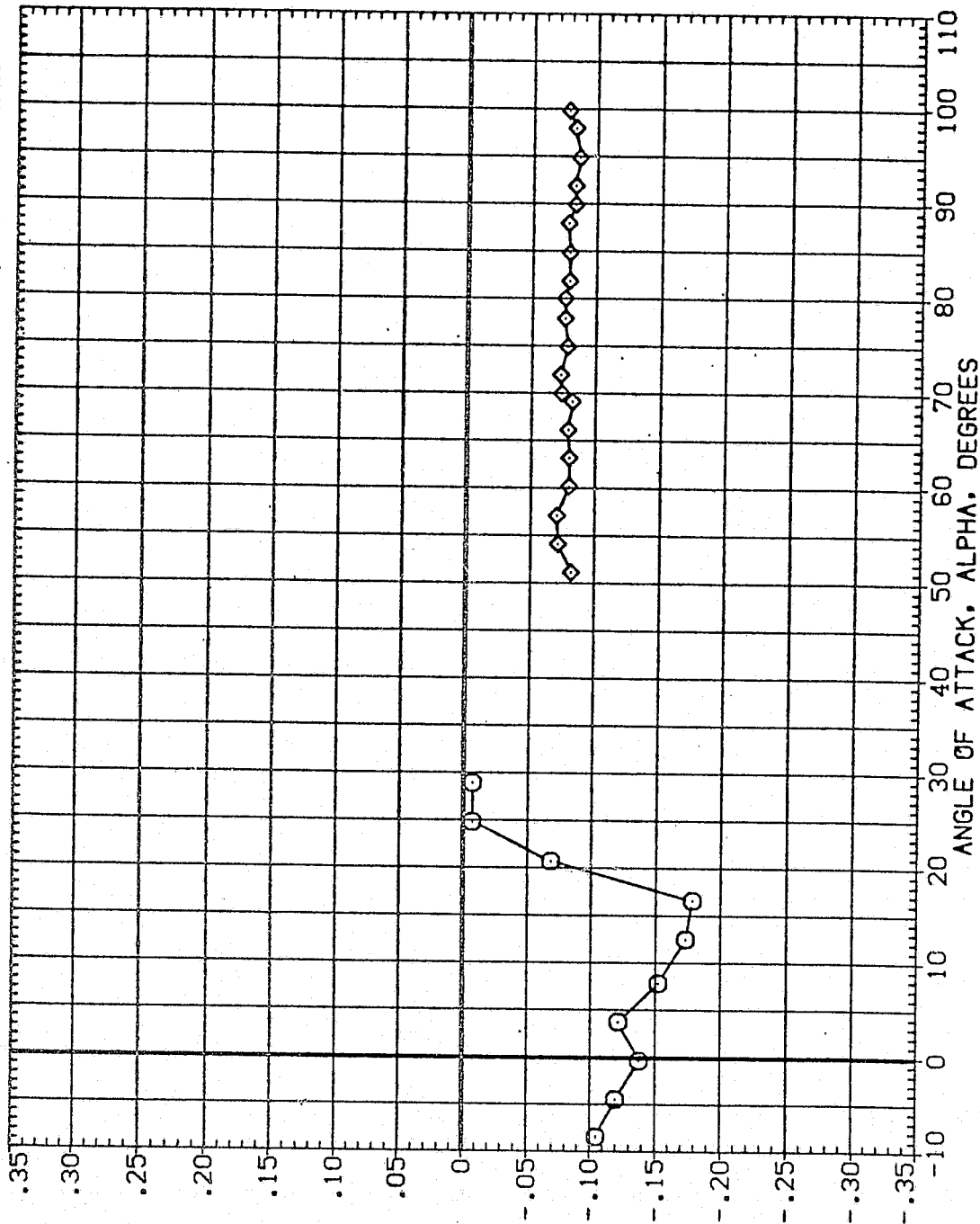
CAJMACH = 1.96

DATA SET SYMBOL
(J1A013)
(J1A018)
(J1A015)

CONFIGURATION DESCRIPTION
MSFC 596 (TA-2F) HCR0200 EXTERNAL TANK, T1
DATA NOT AVAILABLE
MSFC 596 (TA-2F) HCR0200 EXTERNAL TANK, T2

BETA PHI
.000 270.000
.000 315.000
.000 .000

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. XT
YMRP .0000 IN. YT
ZMRP 400.0000 IN. ZT
SCALE .0030



YAWING MOMENT COEFFICIENT IN MISSILE AXIS, C_{ym}

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(MACH = 1.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A001)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	.000	SREF 572.5550 50. FT
(J1A003)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	.000	LREF 324.0000 INCHES
(J1A005)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	.000	BREF 324.0000 INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	XHRP 1086.4000 IN. XT
				YHRP .0000 IN. YT
				ZHRP 400.0000 IN. ZT
				SCALE .0030

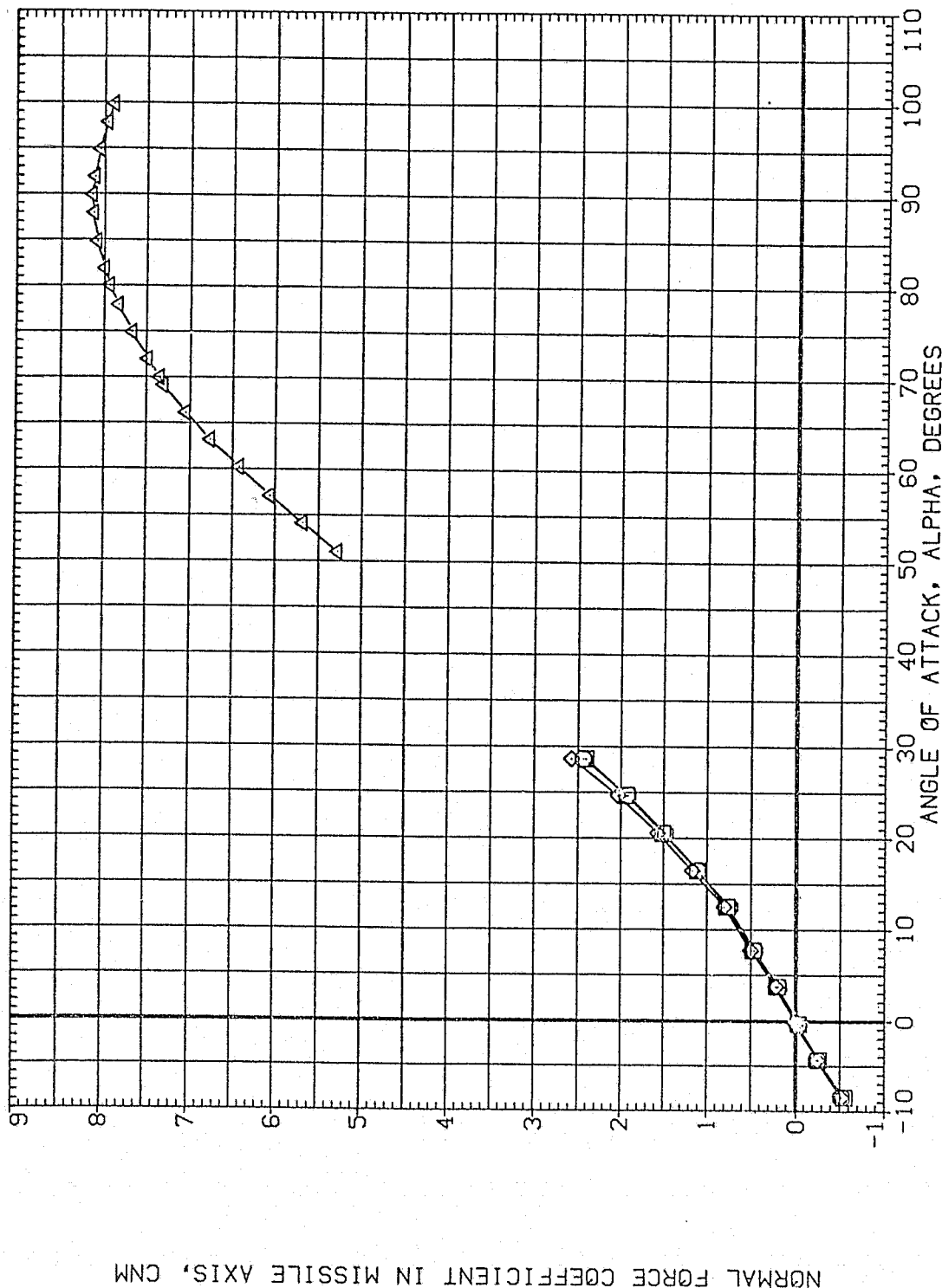


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(A)MACH = 3.48

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (J1A007) MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
 (J1A009) MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
 (J1A011) MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
 (J1A015) MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

BETA PHI
 .000 135.000
 .000 180.000
 .000 225.000
 .000 .000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. X1
 YMRP .0000 IN. Y1
 ZMRP 400.0000 IN. Z1
 SCALE .0030

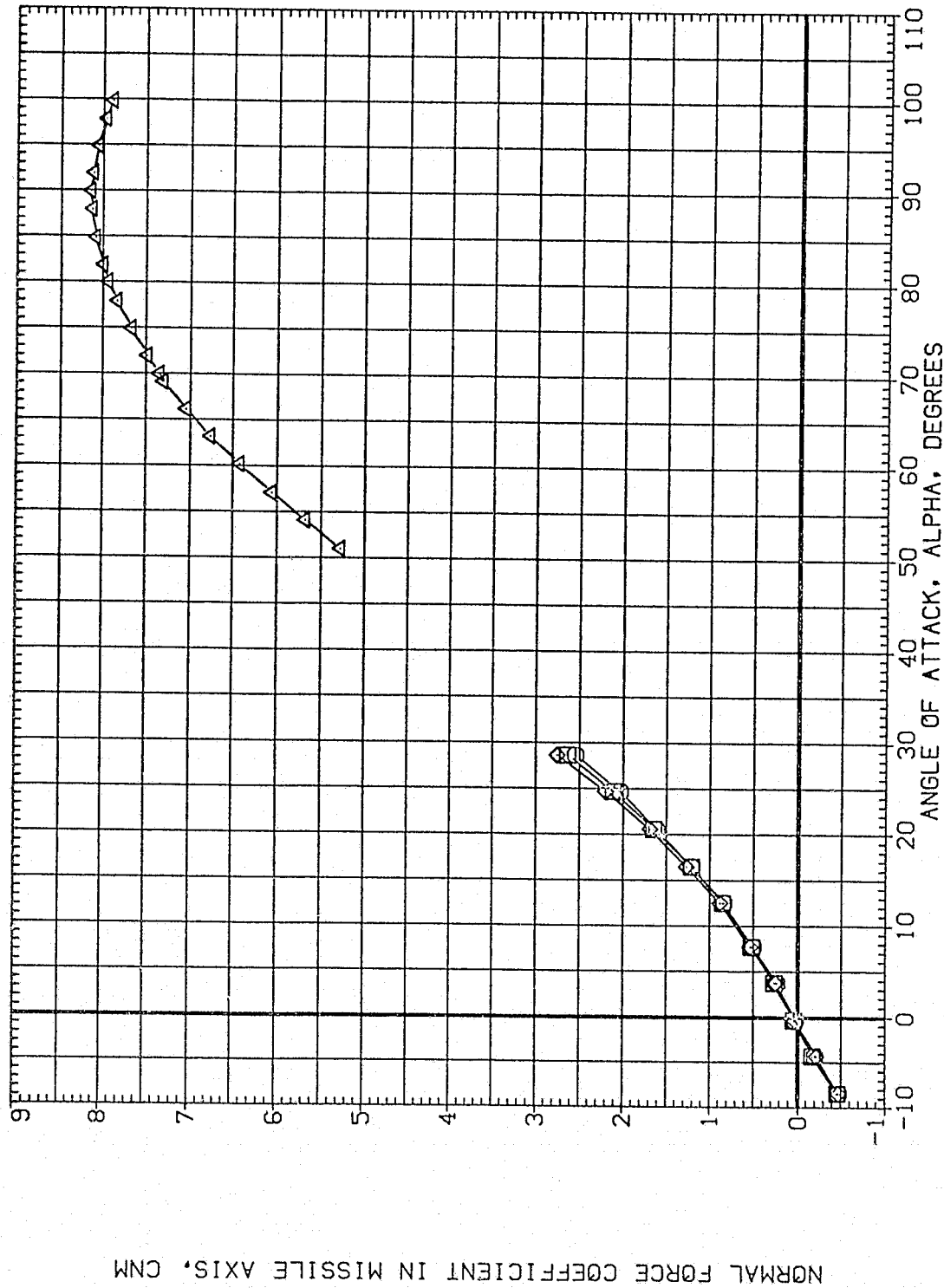


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

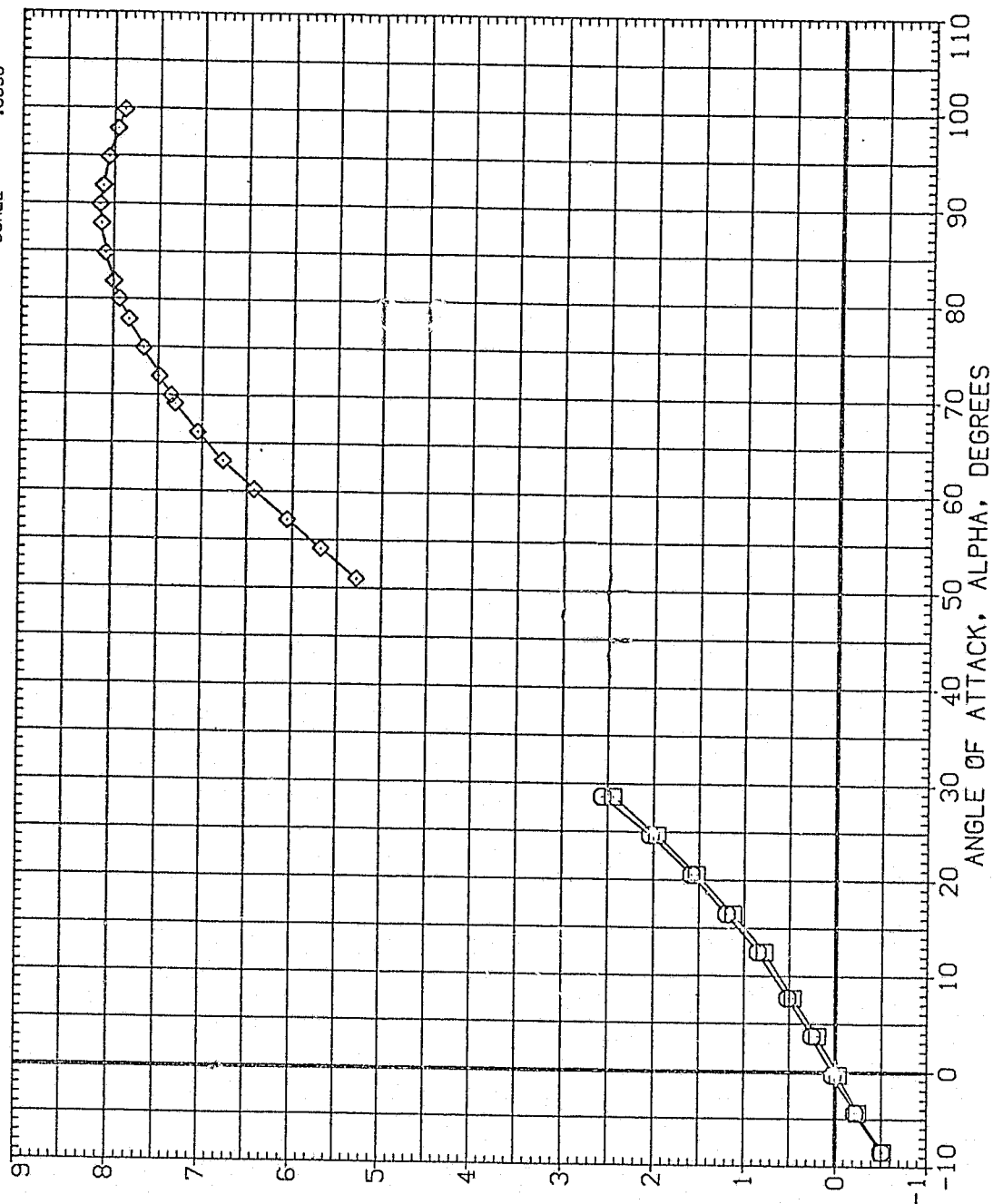
(A)MACH = 3.48

DATA SET SYMBOL
(J1A013)
(J1A018)
(J1A015)

CONFIGURATION DESCRIPTION
MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T2

BETA PHI
.000 270.000
.000 315.000
.000 .000

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. XT
YMRP .0000 IN. YT
ZMRP 400.0000 IN. ZT
SCALE .0030



NORMAL FORCE COEFFICIENT IN MISSILE AXIS, CNM

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(M)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A001)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	.000	SREF 572.5550 SQ. FT
(J1A003)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	45.000	LREF 324.0000 INCHES
(J1A005)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	90.000	BREF 324.0000 INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	YMRP 1086.4000 IN. YT
				ZMRP 400.0000 IN. ZT
				SCALE .0030

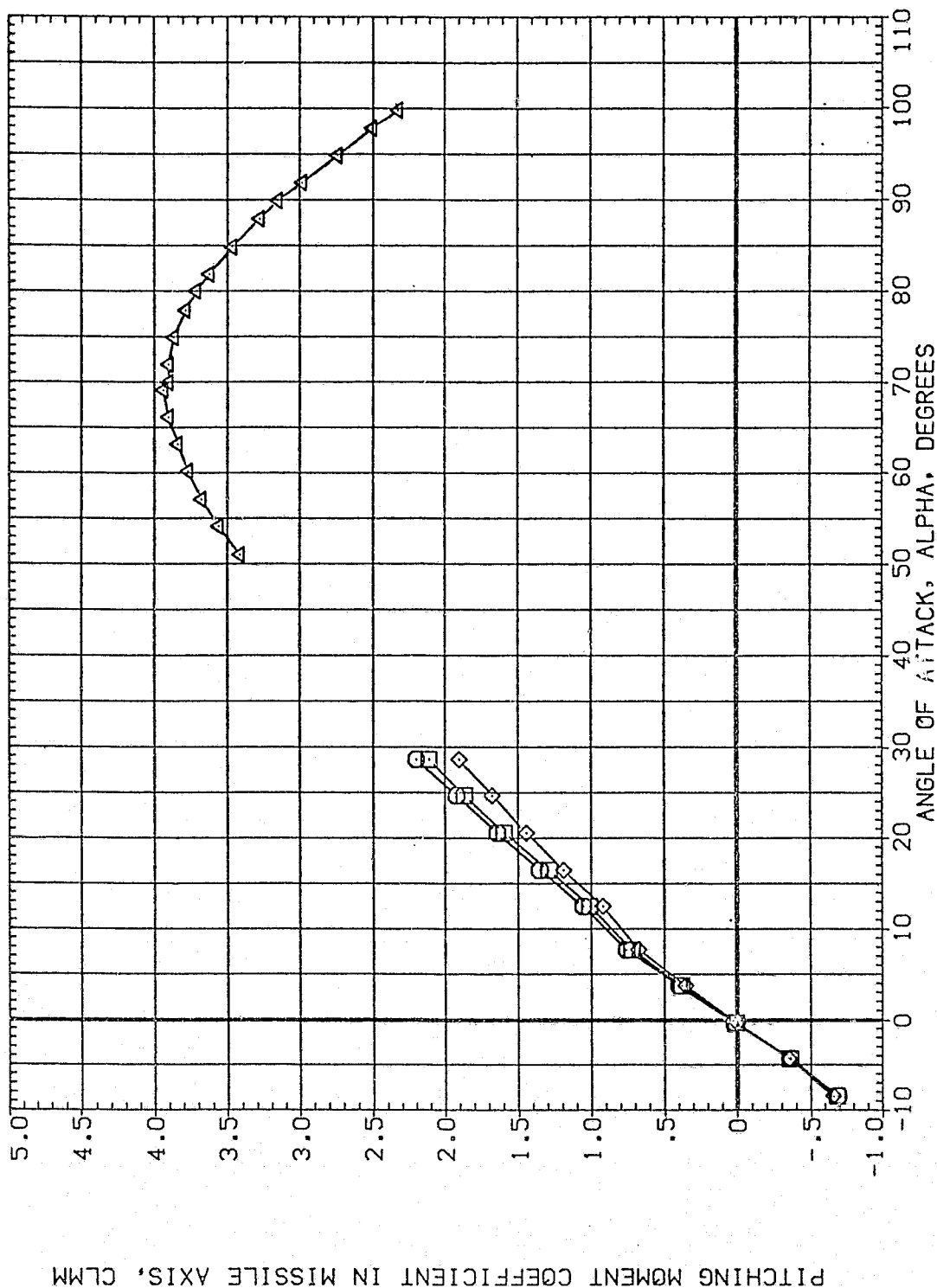


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(M)MACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA PHI REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	SREF	572.5550	SO. FT
(J1A007)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	135.000	LREF	324.0000	INCHES
(J1A009)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	180.000	BREF	324.0000	INCHES
(J1A011)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	225.000	XMRP	1086.4000	IN. YI
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	YMRP	400.0000	IN. YI
				ZMRP	400.0000	IN. YI
				SCALE	.0030	

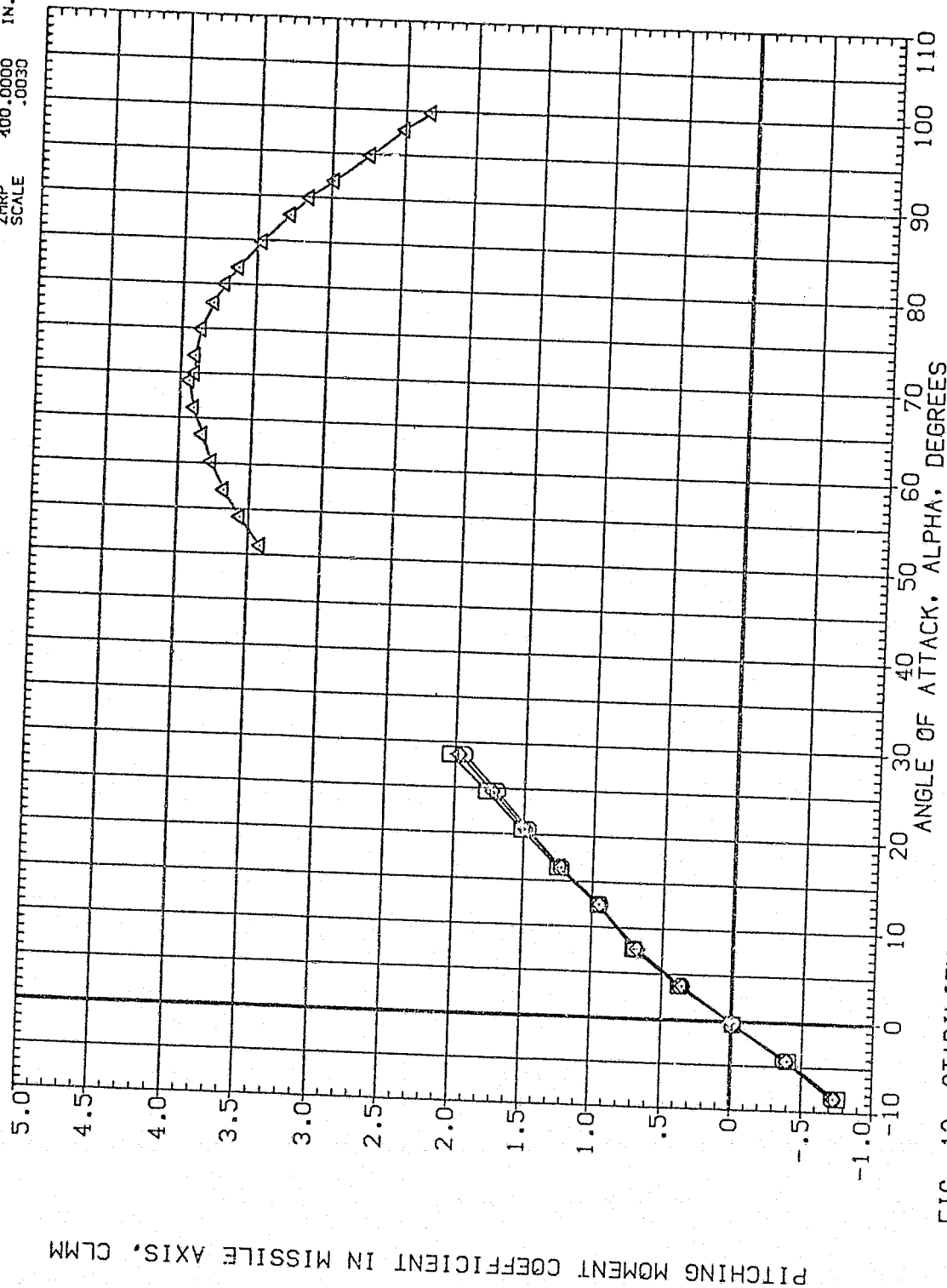


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

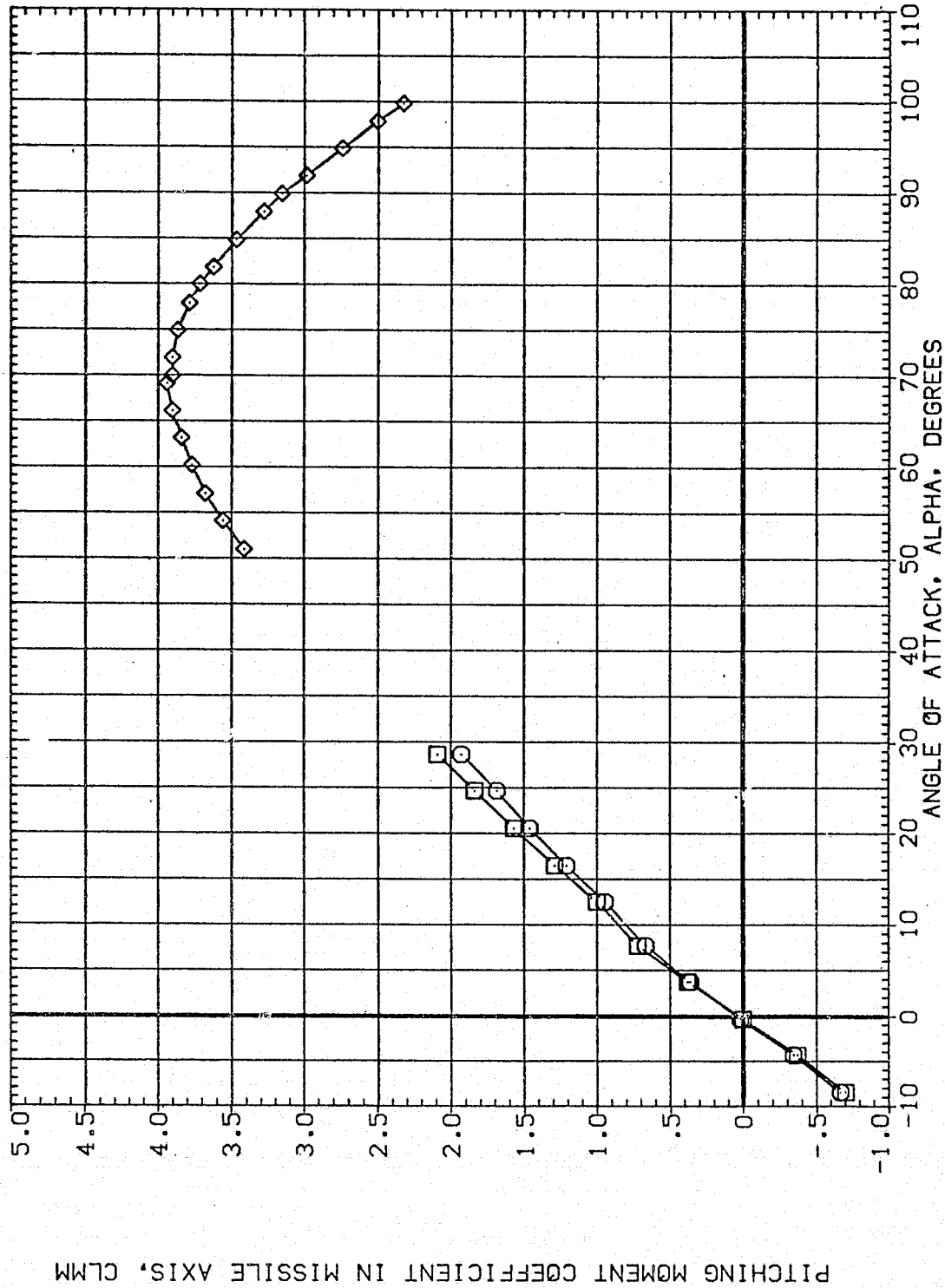
(A)MACH = 3.48

DATA SET SYMBOL
(J1A013)
(J1A018)
(J1A015)

CONFIGURATION DESCRIPTION
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

BETA PHI
.000 270.000
.000 315.000
.000 .000

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. XT
YMRP .0000 IN. YT
ZMRP 400.0000 IN. ZT
SCALE .0030



PITCHING MOMENT COEFFICIENT IN MISSILE AXIS, CLMM

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

CAJ MACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA PHI REFERENCE INFORMATION

(J1A001)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	.000	SREF 572.5550	50. FT
(J1A003)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	45.000	LREF 324.0000	INCHES
(J1A005)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	90.000	BREF 324.0000	INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	XMRP 1086.4000	IN. XT
				YMRP .0000	IN. YT
				ZMRP 400.0000	IN. ZT
				SCALE .0030	

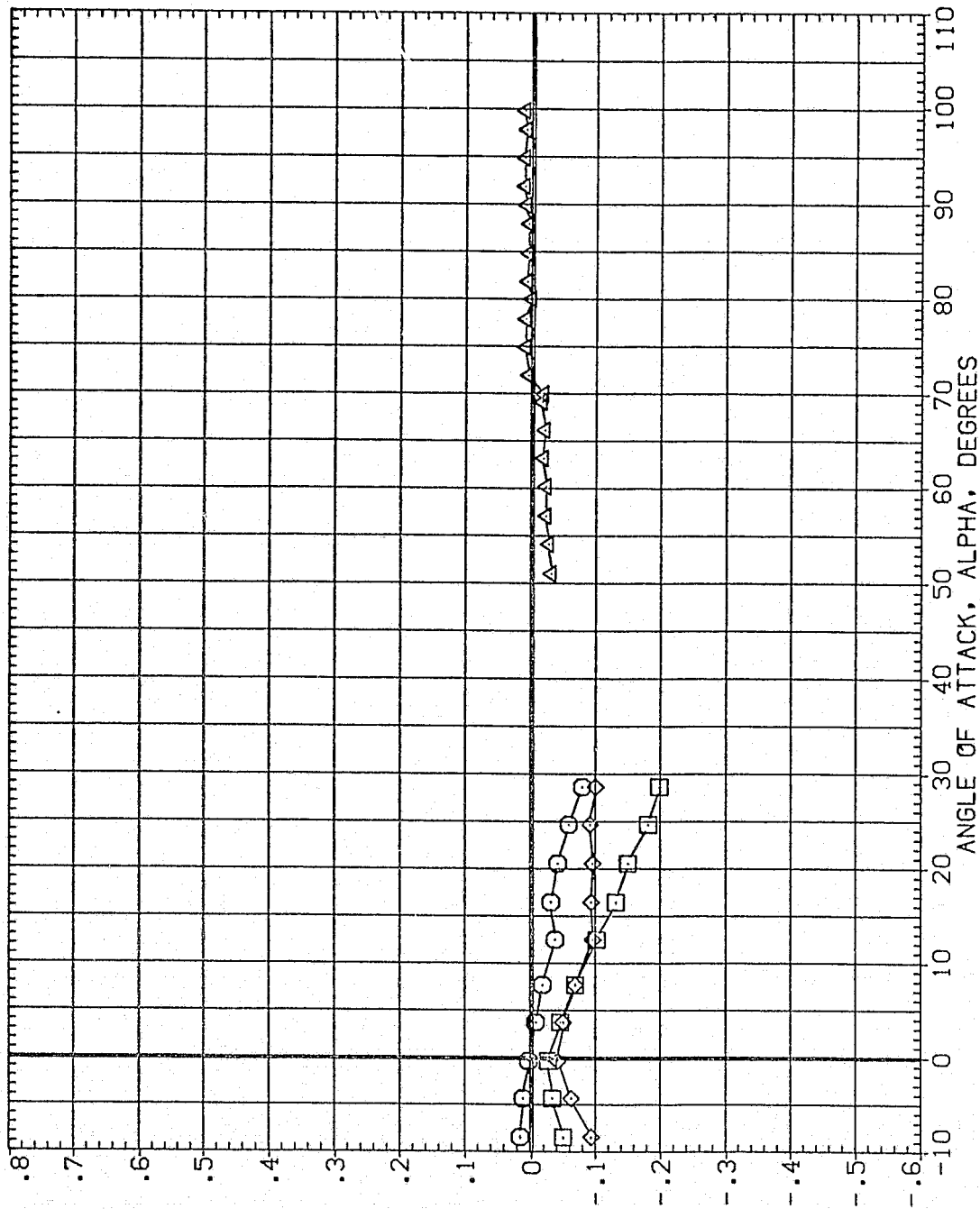


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(A)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A007)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	135.000	SREF 572.5550 SQ. FT
(J1A009)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	180.000	LREF 324.0000 INCHES
(J1A011)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	225.000	BREF 324.0000 INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	XMRP 1086.4000 IN. XT
				YMRP .0000 IN. YT
				ZMRP 400.0000 IN. ZT
				SCALE .0030

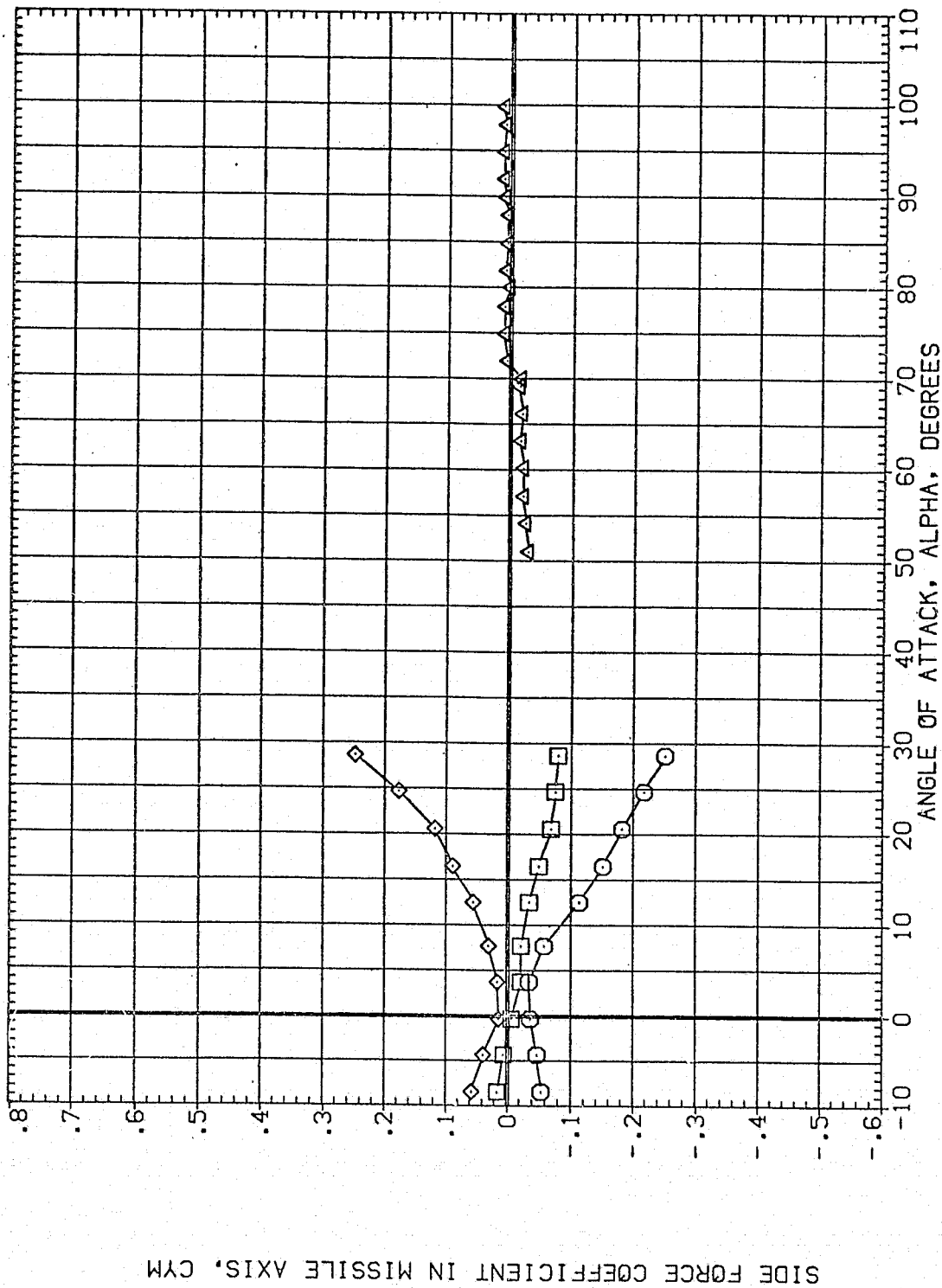


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

CA/MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A013)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	270.000	SREF 572.5550 SQ. FT
(J1A018)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	315.000	LREF 324.0000 INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	BREF 324.0000 INCHES
				XMRP 1086.4000 IN. XT
				YMRP .0000 IN. YT
				ZMRP 400.0000 IN. ZT
				SCALE .0030

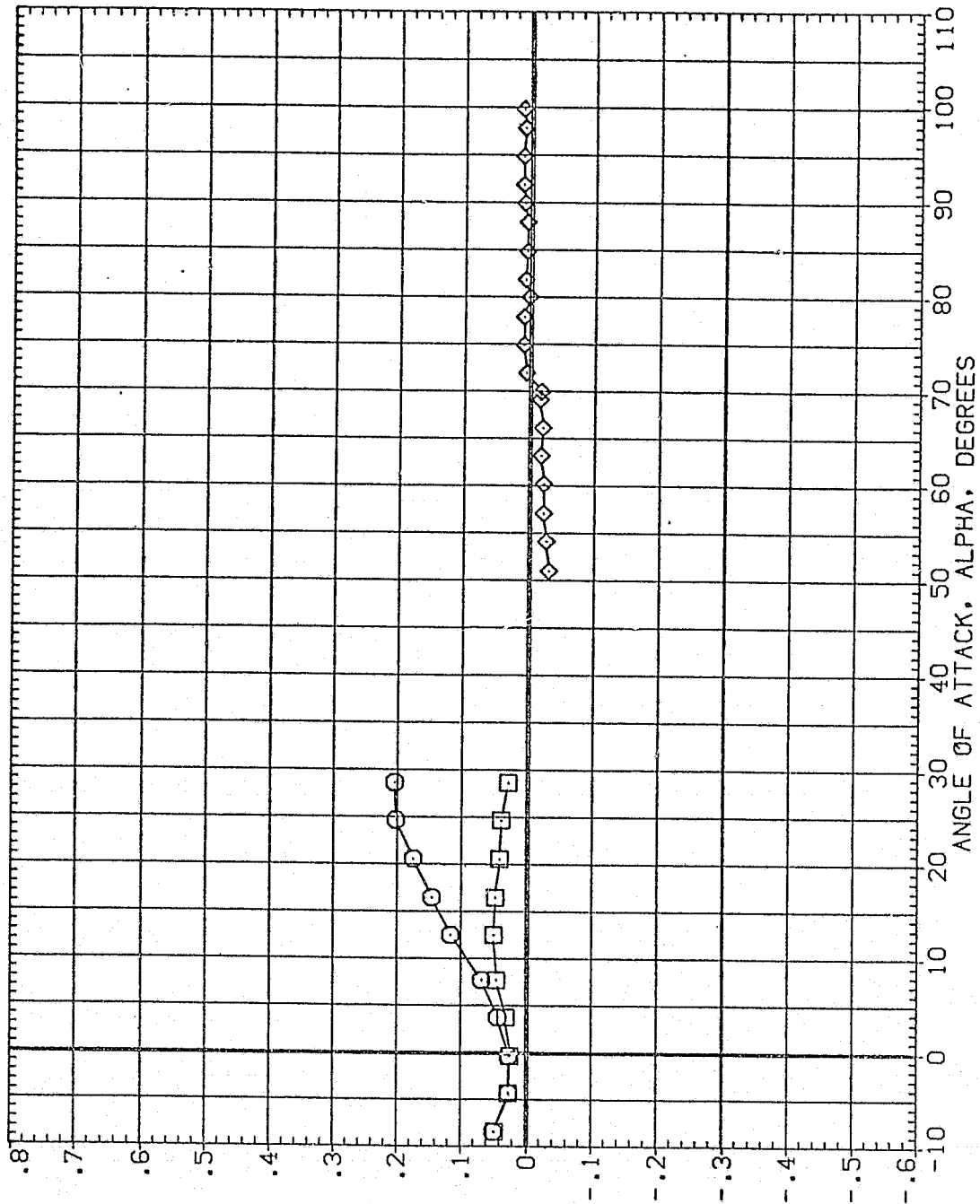
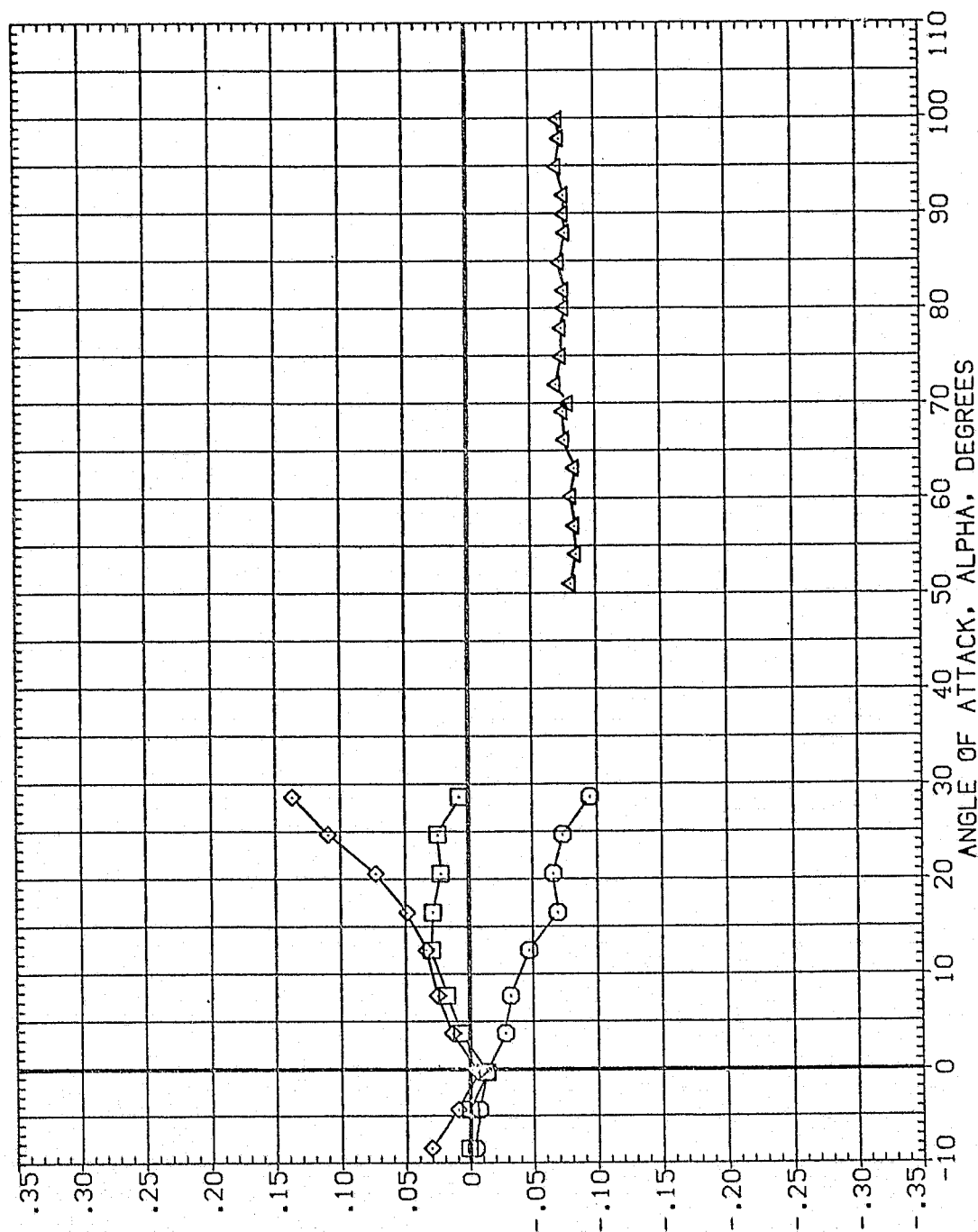


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

CA/MACH = 3.48

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A001)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	.000	SREF 572.5550 SQ. FT
(J1A003)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	45.000	LREF 324.0000 INCHES
(J1A005)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	90.000	BREF 324.0000 INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	XMRP 1086.4000 IN. XT
				YMRP 400.0000 IN. YT
				ZMRP 400.0000 IN. ZT
				SCALE .0030



YAWING MOMENT COEFFICIENT IN MISSILE AXIS, Cym

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

CAJMACB = 3.48

DATA SET SYMBOL

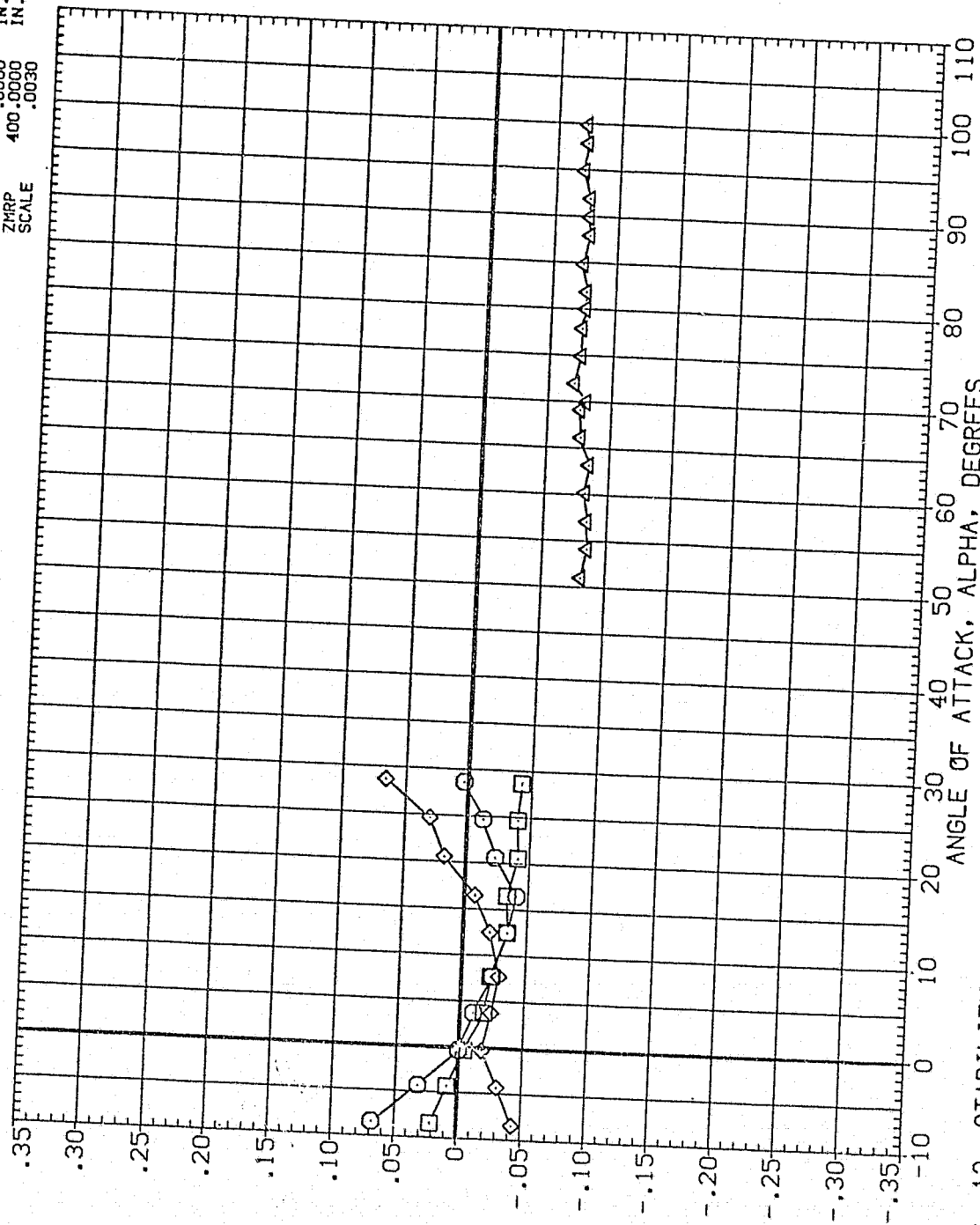
(J1A007)
(J1A009)
(J1A011)
(J1A015)

CONFIGURATION DESCRIPTION

MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T2

BETA PHI
.000 135.000
.000 180.000
.000 225.000
.000 .000

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. XT
YMRP .0000 IN. YT
ZMRP 400.0000 IN. ZT
SCALE .0030



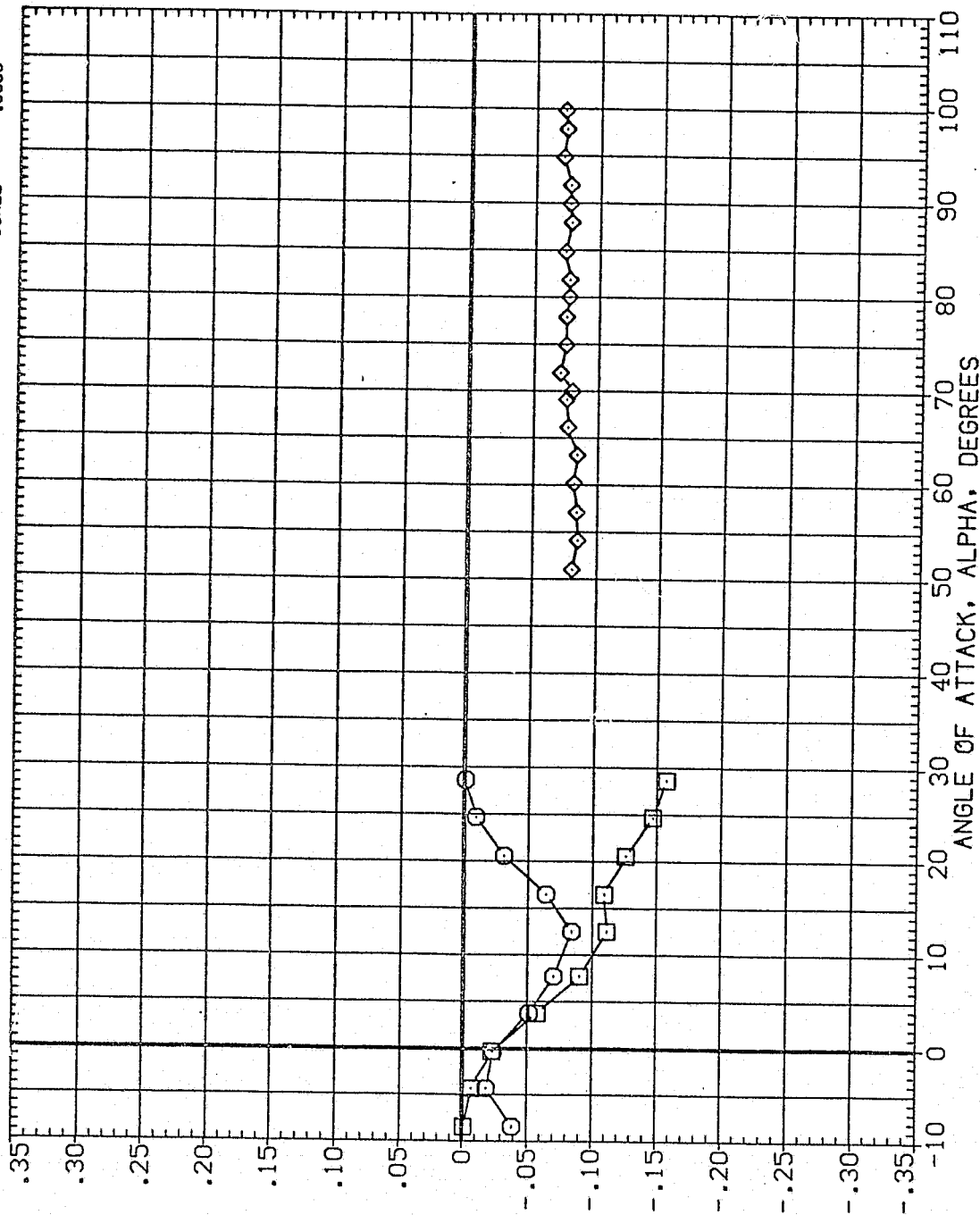
YAWING MOMENT COEFFICIENT IN MISSILE AXIS, C_{ym}

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(M)MACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA PHI REFERENCE INFORMATION

(J1A013)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	270.000	SREF	572.5550	50. FT
(J1A018)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	315.000	LREF	324.0000	INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	BREF	324.0000	INCHES
				XMRP	1086.4000	IN. YI
				YMRP	.0000	IN. YI
				ZMRP	400.0000	IN. ZI
				SCALE	.0030	



YAWING MOMENT COEFFICIENT IN MISSILE AXIS, CYNM

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

CAJMACB = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION

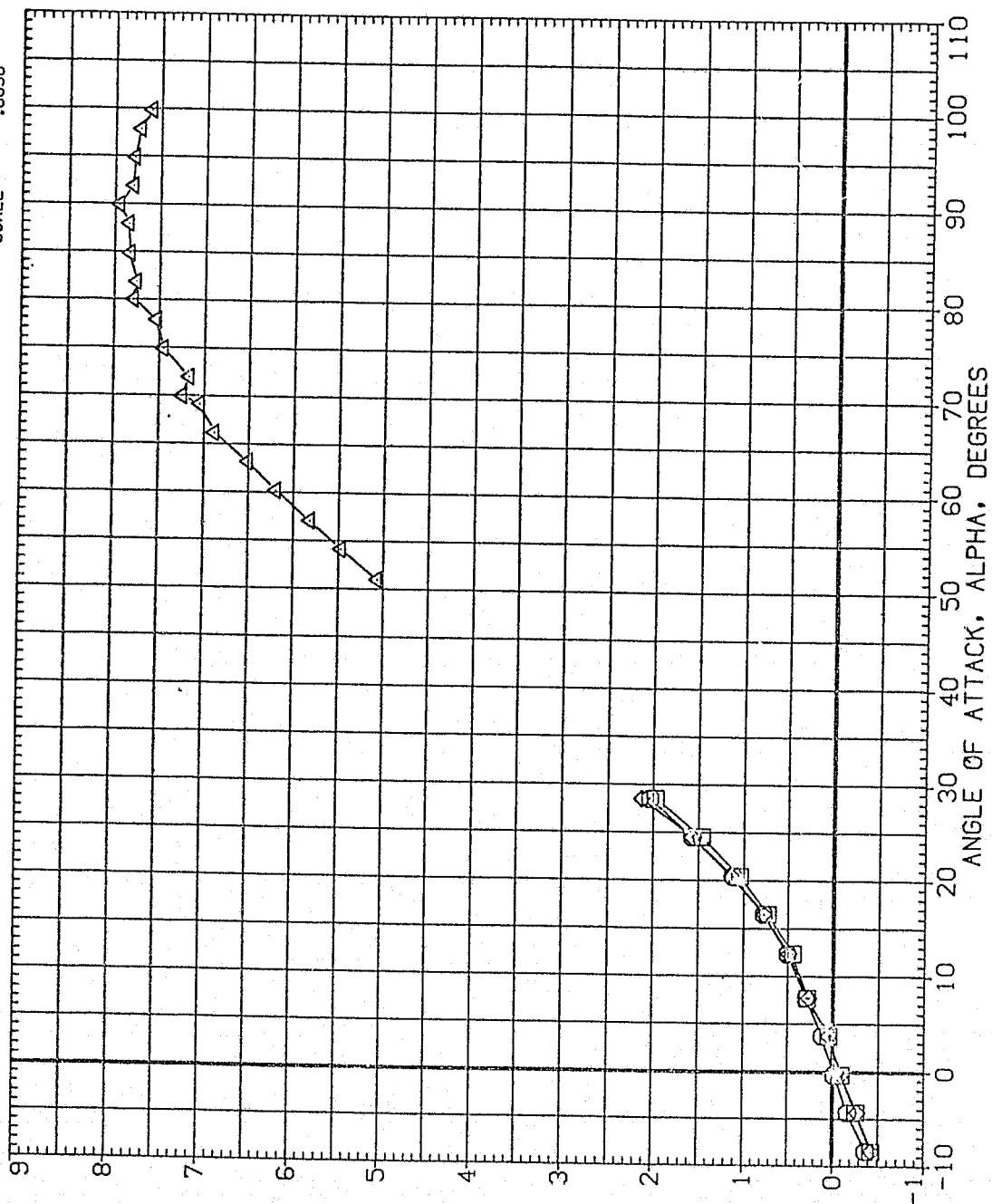
(J1A001) MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T1
 (J1A003) MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T1
 (J1A005) MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T1
 (J1A015) MSFC 596 (TA-2F) MICRO200 EXTERNAL TANK, T2

BETA PHI

.000 .000
 .000 45.000
 .000 90.000
 .000 .000

REFERENCE INFORMATION

SREF 572.5550 SO. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

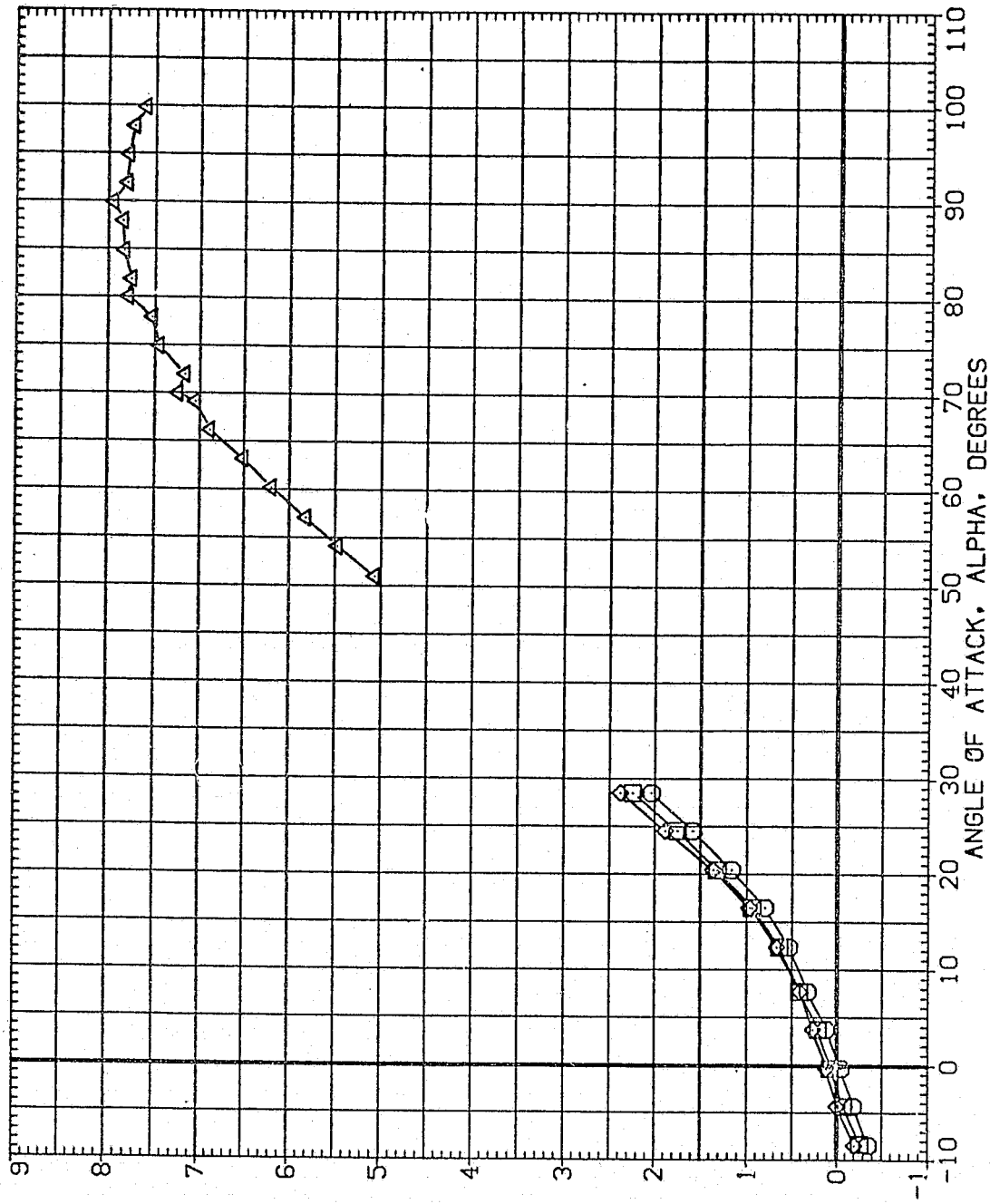


NORMAL FORCE COEFFICIENT IN MISSILE AXIS, CNM

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(A)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A007)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	135.000	SREF 572.5550 SO. FT
(J1A009)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	180.000	LREF 324.0000 INCHES
(J1A011)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	225.000	BREF 324.0000 INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	XMRP 1086.4000 IN. XT
				YMRP .0000 IN. YT
				ZMRP 400.0000 IN. ZT
				SCALE .0030



NORMAL FORCE COEFFICIENT IN MISSILE AXIS, CNM

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)
 (A)MACH = 4.96
 PAGE 2730

DATA SET SYMBOL

(J1A013)
(J1A018)
(J1A015)

CONFIGURATION DESCRIPTION

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

BETA PHI

.000 270.000
.000 315.000
.000 .000

REFERENCE INFORMATION
SREF 572.5550 SO. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. XT
YMRP .0000 IN. YT
ZMRP 400.0000 IN. ZT
SCALE .0030

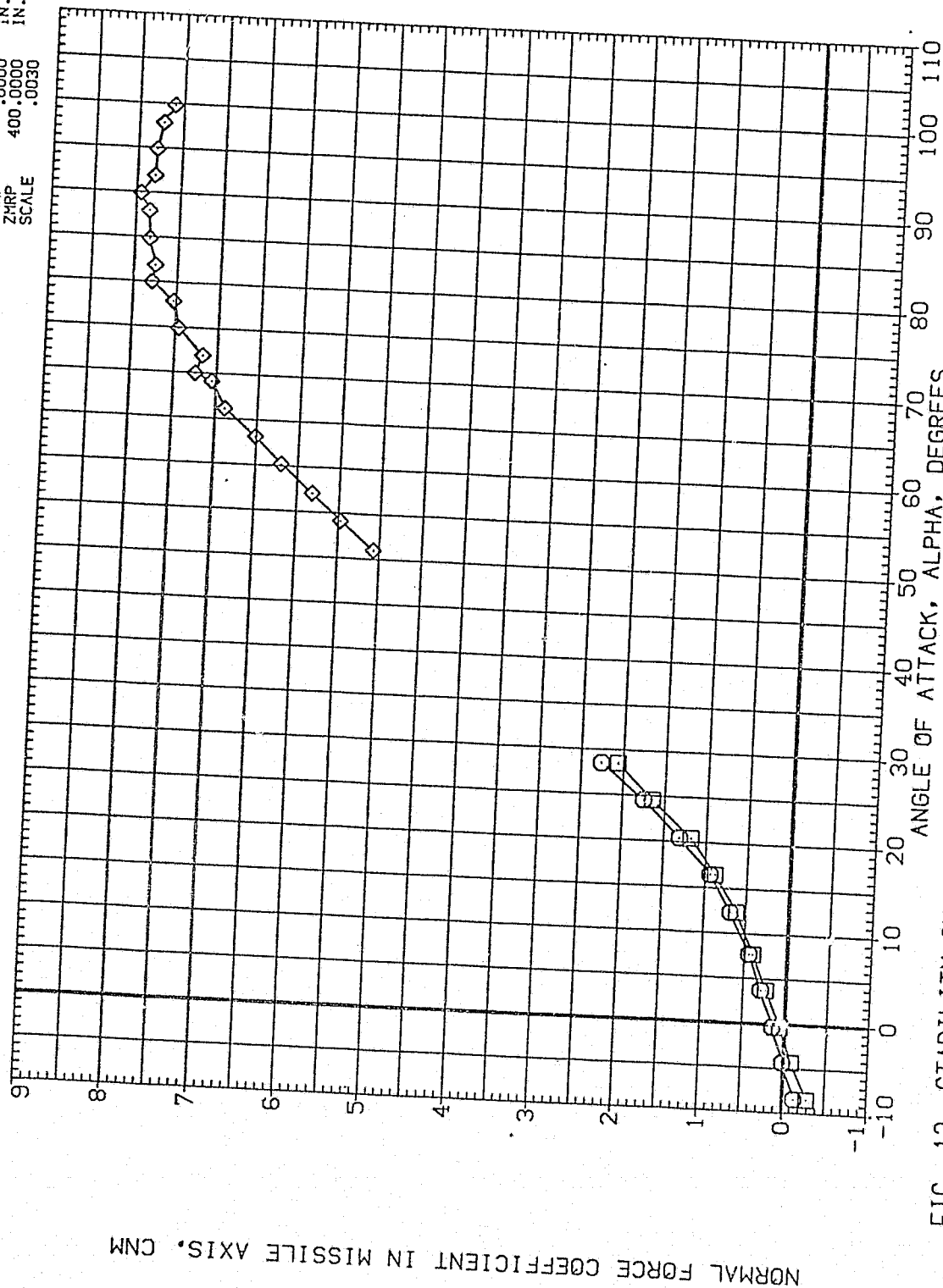


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTRUDANCES (T1 - T2)
CA/MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A001)	MSFC 595 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	.000	SREF 572.5550 SO. FT
(J1A003)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	45.000	LREF 324.0000 INCHES
(J1A005)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	90.000	BREF 324.0000 INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	XMRP 1086.4000 IN. YI
				YMRP .0000 IN. ZI
				ZMRP 400.0000 IN. ZI
				SCALE .0030

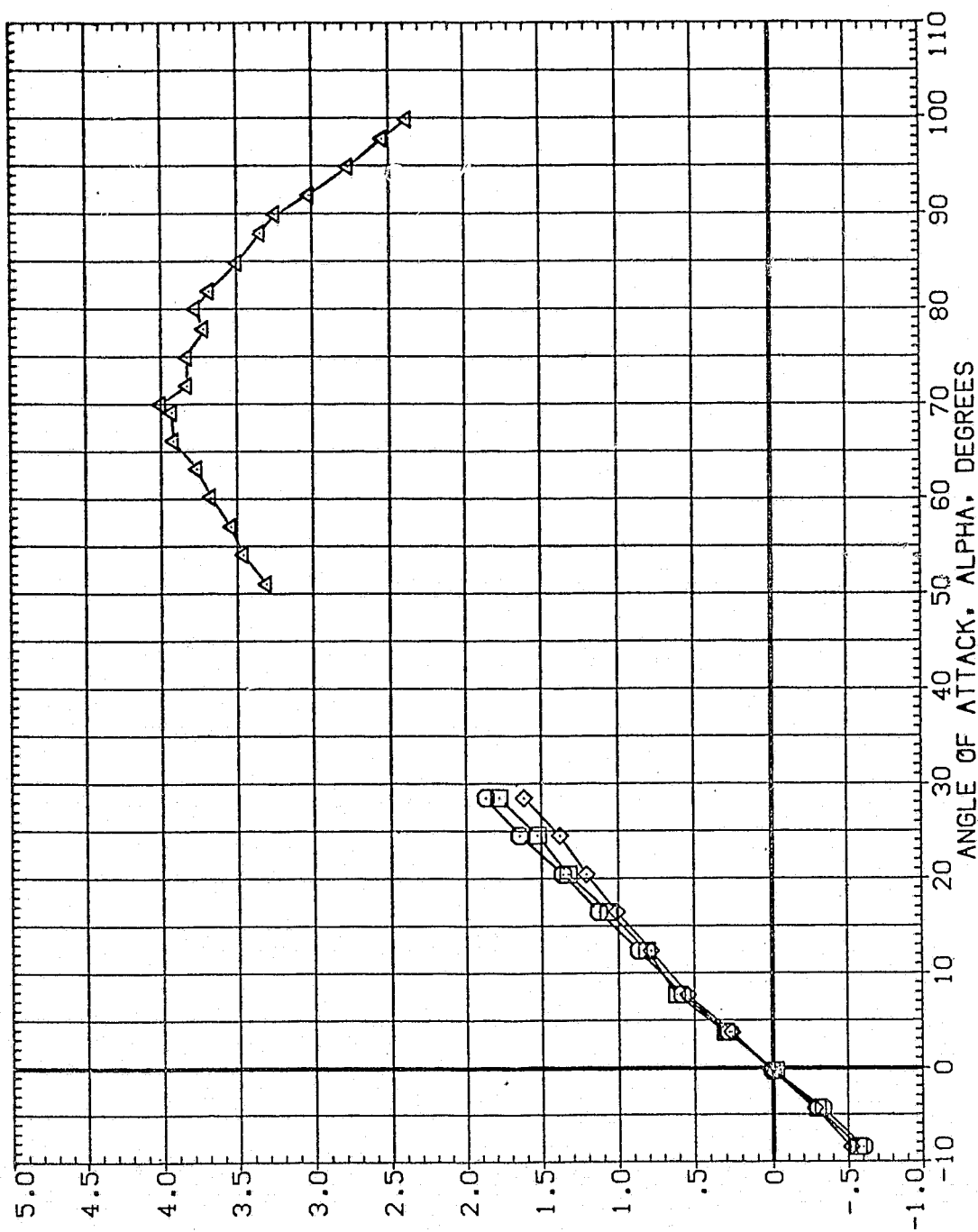


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

CAJMACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	TANK, T1	TANK, T2	BETA	PHI	REFERENCE INFORMATION
(J1A07)	MSFC 596 (TA-2F) MCR0200	EXTERNAL	EXTERNAL	.000	135.000	SREF 572.5550
(J1A09)	MSFC 596 (TA-2F) MCR0200	EXTERNAL	EXTERNAL	.000	180.000	LREF 324.0000
(J1A011)	MSFC 596 (TA-2F) MCR0200	EXTERNAL	EXTERNAL	.000	225.000	BRF 324.0000
(J1A015)	MSFC 596 (TA-2F) MCR0200	EXTERNAL	EXTERNAL	.000	225.000	YMRP 1385.4000
						ZMRP .0000
						SCALE 400.0000
						IN. YZ
						IN. ZT

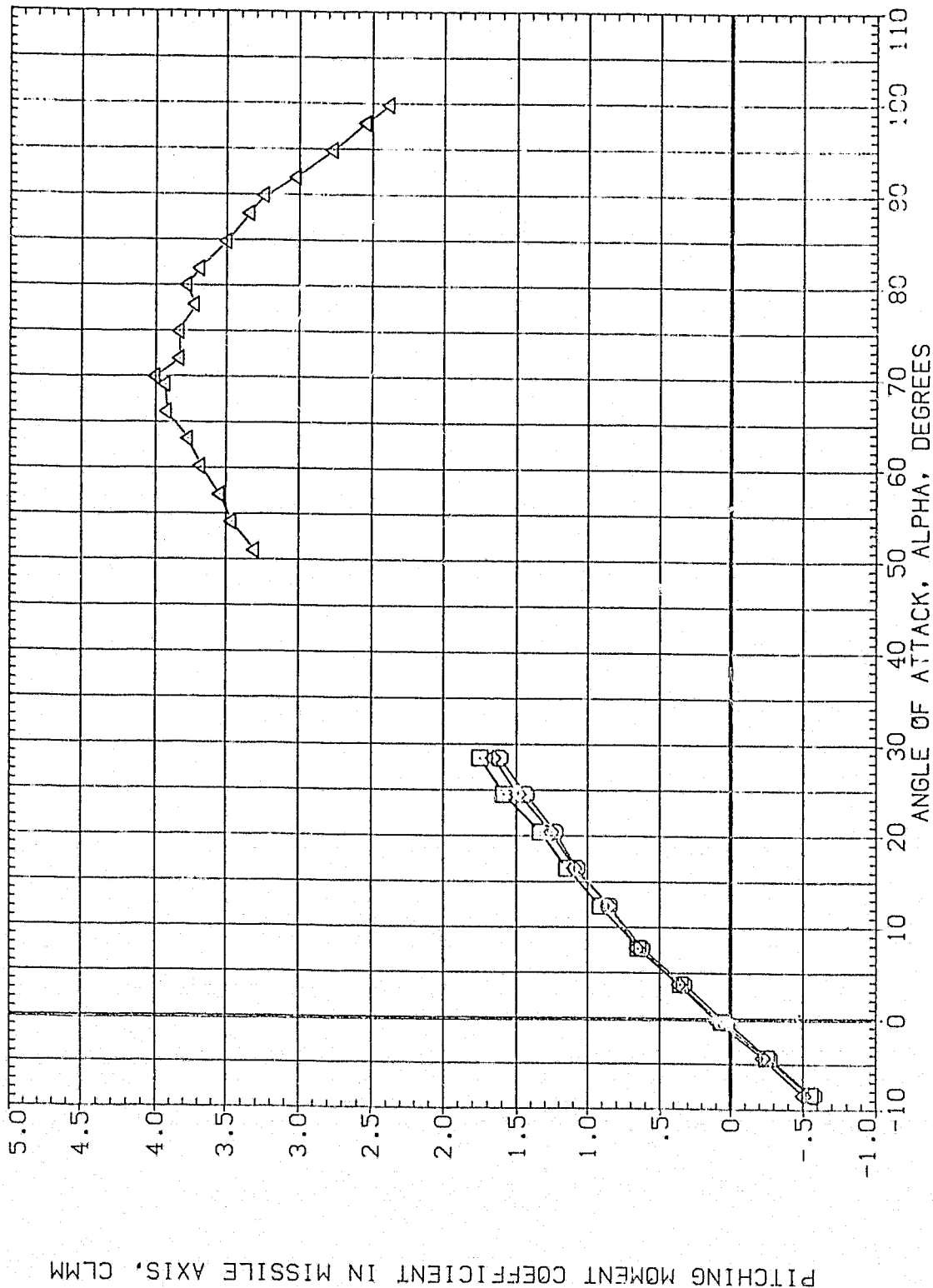


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(M)MACH = 4.96

PAGE 2733

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A013)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	270.000	SREF 572.5550 SQ. FT
(J1A018)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	315.000	LREF 324.0000 INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	BREF 324.0000 INCHES
				XMRP 1086.4000 IN. XT
				YMRP .0000 IN. YT
				ZMRP 400.0000 IN. ZT
				SCALE .0030

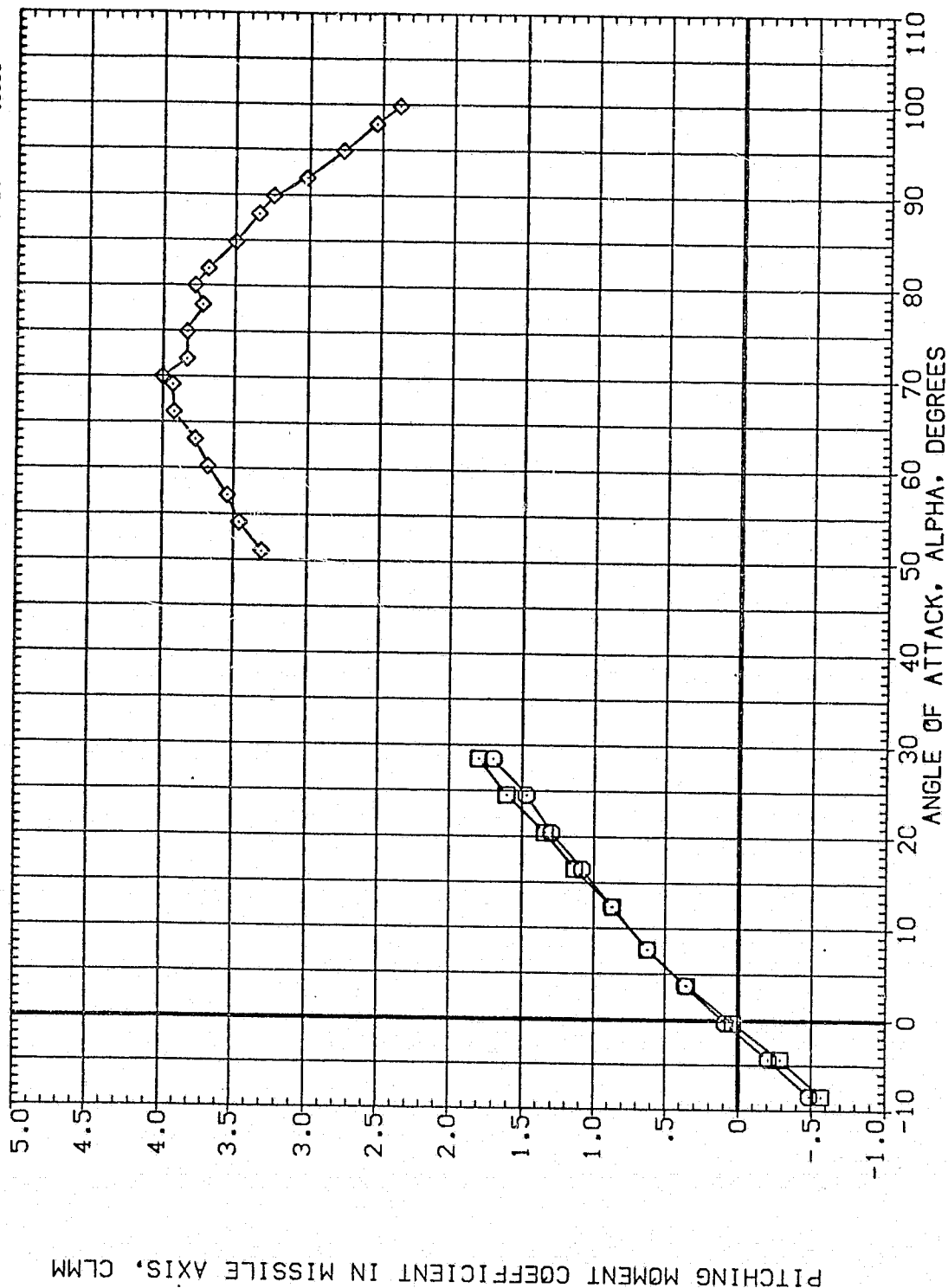


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(A)MACH = 4.96

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(J1A001)
(J1A003)
(J1A005)
(J1A015)

MSFC 596 (TA-2F) MGR0200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MGR0200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MGR0200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MGR0200 EXTERNAL TANK, T2

BETA PHI
.000 .000
.000 45.000
.000 90.000
.000 .000

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
YMRP 1086.4000 IN. XT
ZMRP .0000 IN. YT
SCALE 400.0000 IN. ZT

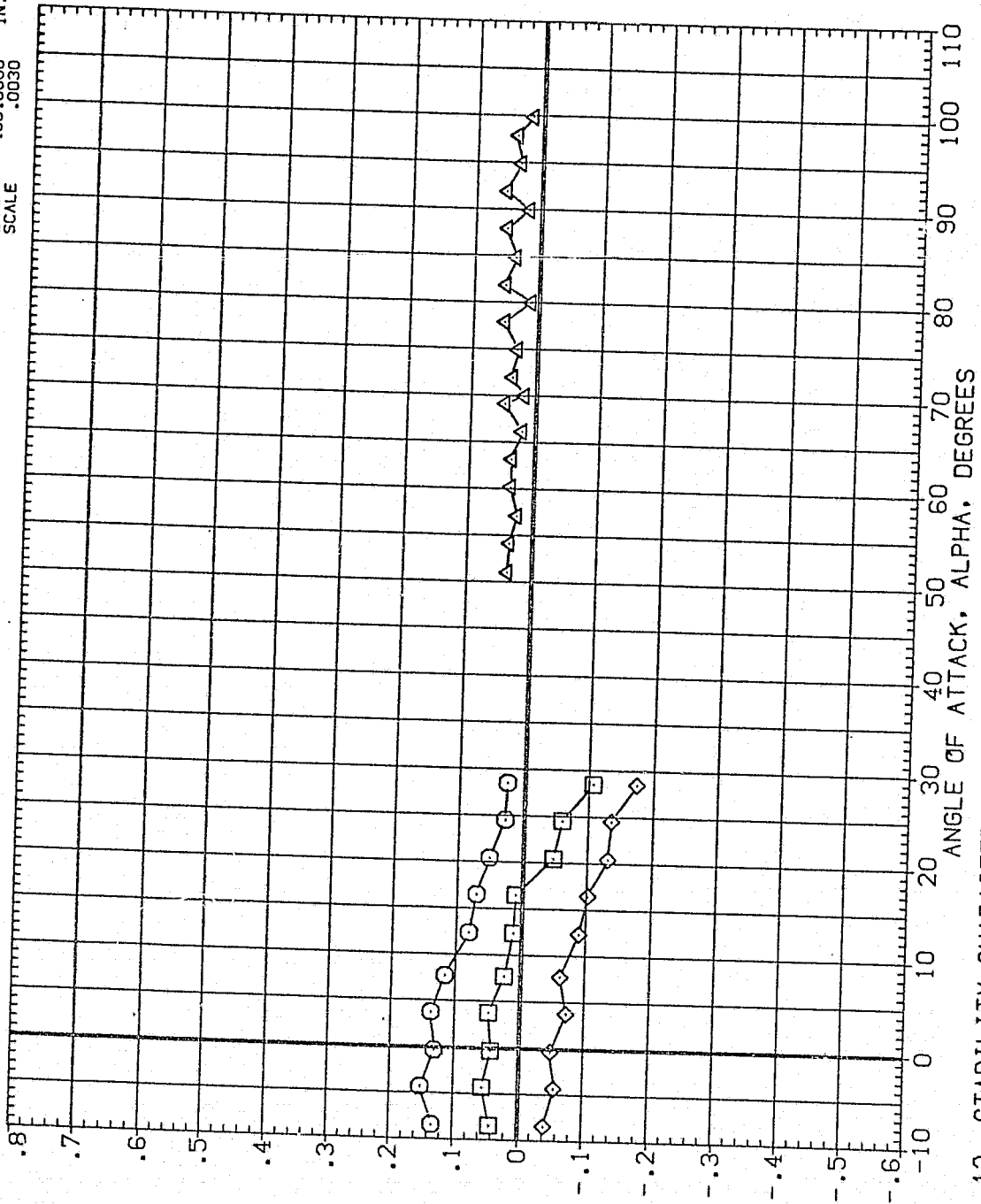


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

CAJMACB = 4.96

SIDE FORCE COEFFICIENT IN MISSILE AXIS, CYM

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(J1A007) MSEC 586 (TA-2F) MICRO200 EXTERNAL TANK. T1
 (J1A009) MSEC 586 (TA-2F) MICRO200 EXTERNAL TANK. T1
 (J1A011) MSEC 586 (TA-2F) MICRO200 EXTERNAL TANK. T1
 (J1A015) MSEC 586 (TA-2F) MICRO200 EXTERNAL TANK. T2

BETA PHI
 .000 135.000
 .000 180.000
 .000 225.000
 .000

REFERENCE INFORMATION
 SREF 572.5550 SQ. FT
 LREF 324.0000 INCHES
 BREF 324.0000 INCHES
 XMRP 1086.4000 IN. XT
 YMRP .0000 IN. YT
 ZMRP 400.0000 IN. ZT
 SCALE .0030

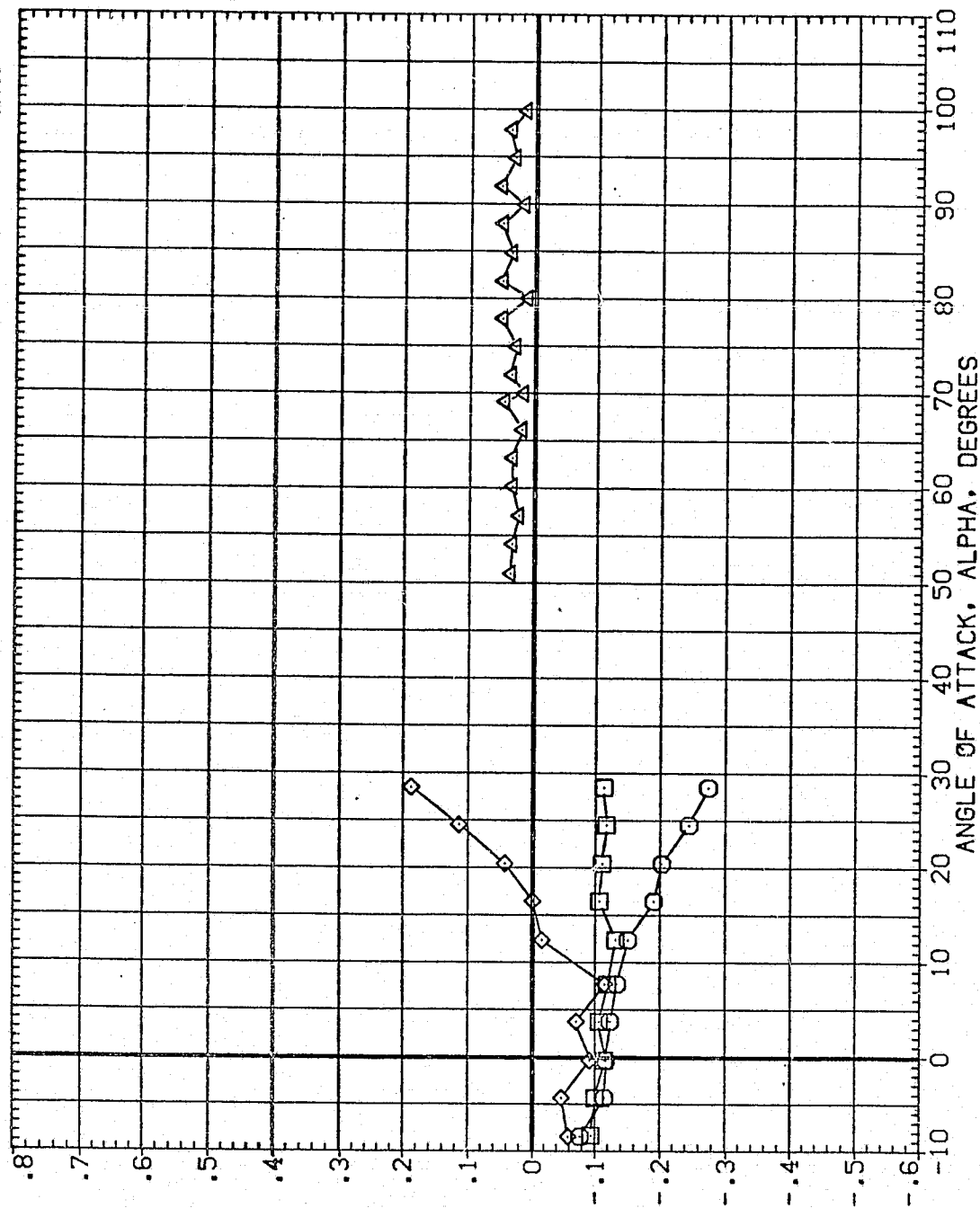


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)
 Ca/MACH = 4.96
 PAGE 2736

DATA SET SYMBOL
(J1A013)
(J1A014)
(J1A015)

CONFIGURATION DESCRIPTION
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2
MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2

BETA PHI
.000 270.000
.000 315.000
.000 .000

REFERENCE INFORMATION
SREF 572.5550 SQ. FT
LREF 324.0000 INCHES
BREF 324.0000 INCHES
XMRP 1086.4000 IN. X1
YMRP .0000 IN. Y1
ZMRP 400.0000 IN. Z1
SCALE .0030

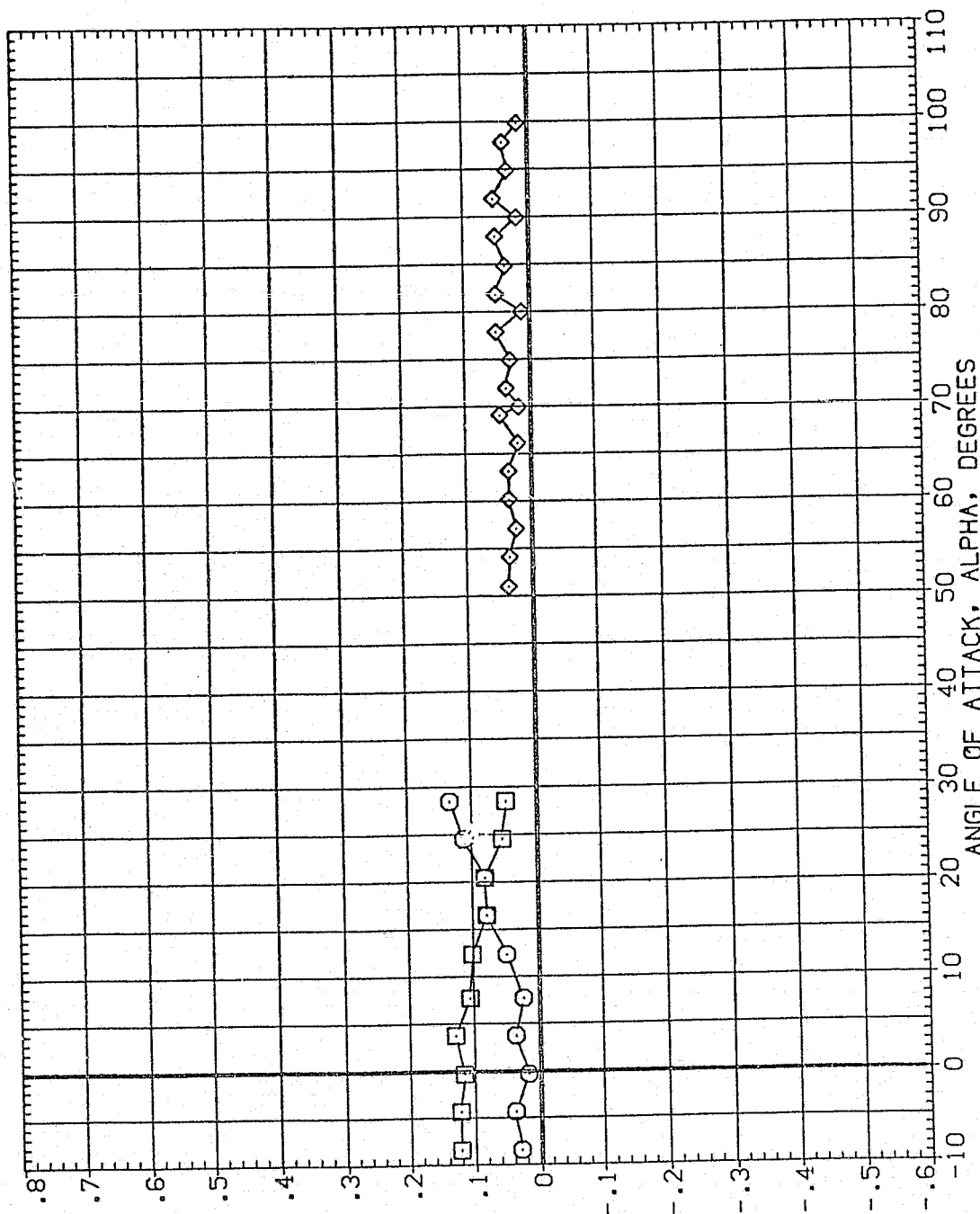


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(A)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A001)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	.000	SREF 572.5550 SO. FT
(J1A003)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	45.000	LREF 324.0000 INCHES
(J1A005)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1	.000	90.000	BREF 324.0000 INCHES
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2	.000	.000	XMRP 1086.4000 IN. XT
				YMRP .0000 IN. YT
				ZMRP 400.0000 IN. ZT
				SCALE .0030

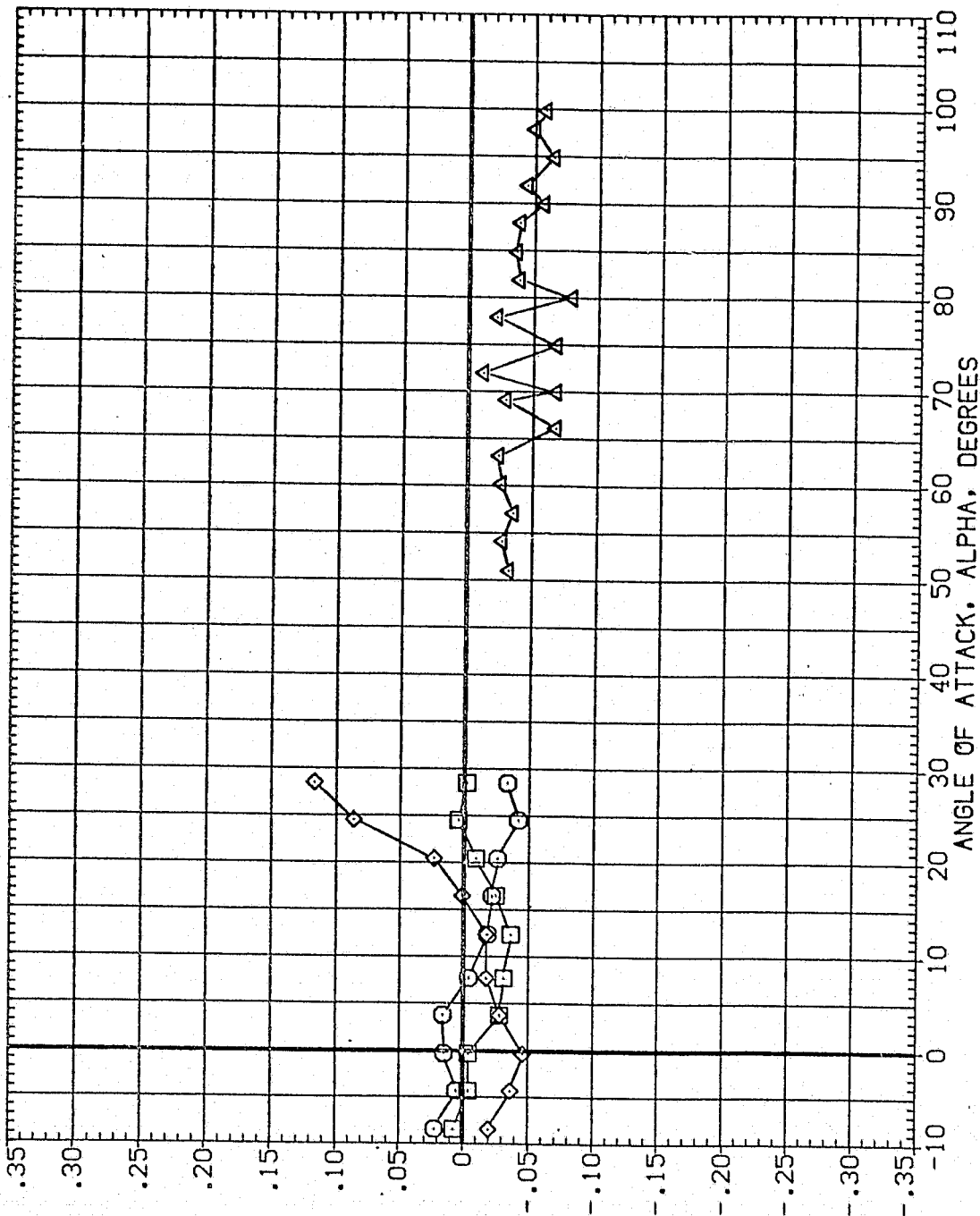


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(A)MACH = 4.96

REFERENCE INFORMATION

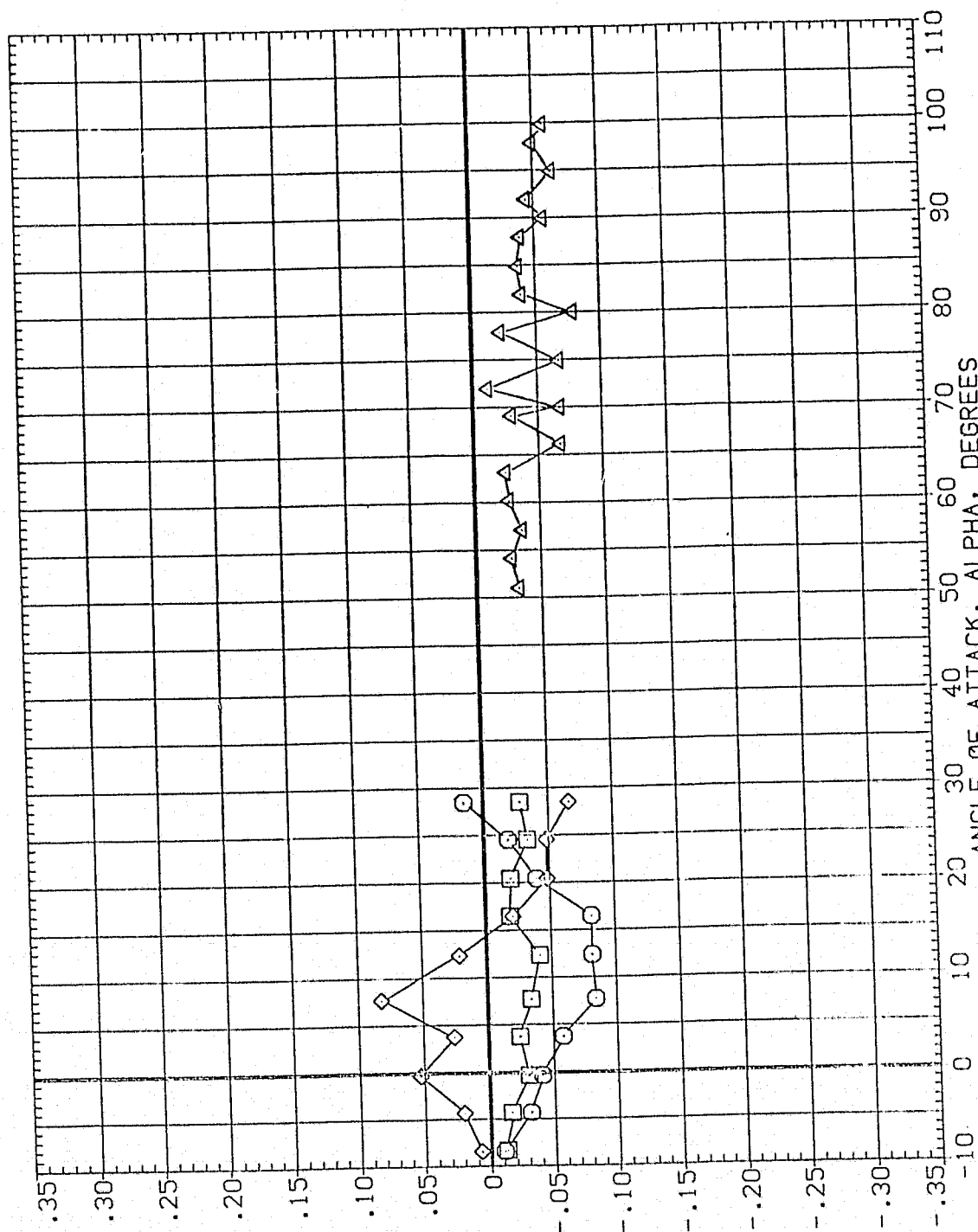
SREF	572.5550	SO. FT
LREF	324.0000	INCHES
BREF	324.0000	INCHES
XMRP	1036.4000	IN. X
YMRP	.0000	IN. Y
ZMRP	400.0000	IN. Z
SCALE	.0030	

BETA PHI

.000	135.000
.000	180.000
.000	225.000
.000	.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(J1A007)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
(J1A009)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
(J1A011)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1
(J1A015)	MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T2



YAWING MOMENT COEFFICIENT IN MISSILE AXIS, CYM

FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

CAD MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	REFERENCE INFORMATION
(J1A013)	MSFC 596 (TA-2F) MCP2200 EXTERNAL TANK, T1	.000	270.000	SREF 572.5550
(J1A018)	MSFC 596 (TA-2F) MCP2200 EXTERNAL TANK, T1	.000	315.000	LREF 324.0000
(J1A015)	MSFC 596 (TA-2F) MCP2200 EXTERNAL TANK, T2	.000	.000	BREF 324.0000
				XMPP 1086.4000
				YREF .0000
				ZREF .0000
				SCALE 400.0000

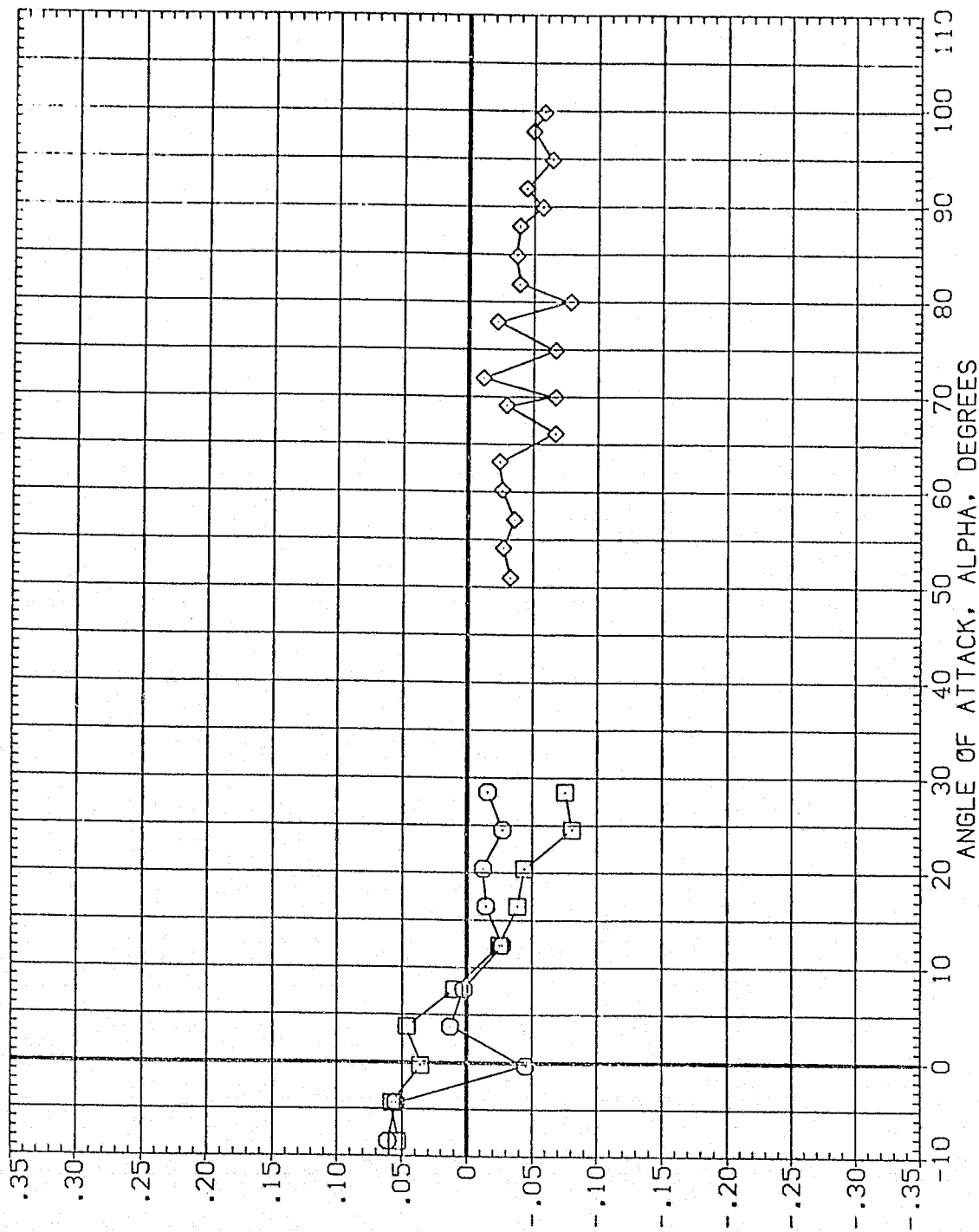


FIG. 12 STABILITY CHARACTERISTICS - WITH AND WITHOUT PROTUBERANCES (T1 - T2)

(AJMACH = 4.96